

**THE EFFECT OF BACKGROUND KNOWLEDGE AND TEXT STRUCTURE ON EGYPTIAN
AND DANISH SECONDARY SCHOOL STUDENTS' READING COMPREHENSION**

Volume 1

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**Ph.D
University of Edinburgh
2001**



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Acknowledgements

I wish to express my sincere thanks to the following people: my first supervisor, Dr. Michael J. Wallace for all his encouragement and guidance; my current supervisor Dr. Ian MacWilliam for his assistance; the members of the postgraduate research committee, especially Dr. Neale Laker, without whose patience this thesis might not have been completed.

Special thanks also to my colleague Chris Stone who patiently listened to my ideas and suggestions; my friend Merlyn Guthrie for her help in typing the early draft of the first part of the thesis. Thanks also to the teachers and students of al-Amal secondary school in Egypt and Aarhus Katedral secondary school in Denmark for their participation in the experiments contained in this thesis. Finally, I would like to thank my wife Hanan, for her encouragement, unrelenting support and for her patience during this difficult time.

Mahmoud Ibrahim Abdalla
Edinburgh
September 2001

ABSTRACT

Research based on the schema theoretic approach has shown that reading comprehension is an interactive process. It is an interaction between the reader and the text. The interaction involves the reader's background knowledge of text structure and the hierarchical content structure of the text; what Carrell (1984) calls content and formal schemata. This thesis relates to this kind of research. The schemata theory indicates that the reader's cultural background knowledge of the content facilitates EFL/ESL reading comprehension. Meyer (1975,1977) recognizes five types of expository text structures that are believed to affect comprehension and recall: collection, description, problem/solution, comparison/contrast, and causation. She claims that the cause/effect and comparison/contrast are well organized forms while the collection of descriptions is the loosest type. Reading comprehension research paid much attention to the way EFL/ESL readers deal with the well organized texts while neglecting how these readers cope with the less tightly organized types. This thesis is designed to investigate the effect of the collection of descriptions text type on the quantity and quality of Egyptian and Danish secondary school students' recall as well as the effect of topic familiarity on their comprehension.

In the first phase of the thesis, one hundred Egyptian and Danish students read and then recalled two passages representing the two cultures. The passages were about the Egyptian festival of Shamm en-Naseem and the Danish festival of Fastelaven. This was followed by a cloze test. The results indicated that prior knowledge of the content of the passage aided comprehension. As predicted, Egyptian and Danish subjects recalled more T units (idea units) from the familiar text than the unfamiliar one. While there was a statistical significance ($p < 0.0001$) between the two mean scores of Danish subjects, the performance of the Egyptian subjects on both passages was almost the same (the mean scores were 8.2 for the Egyptian text and 7.3 for the Danish text). The cloze test scores and the T unit analysis revealed that items that are closely related to cultural aspects of the text were best recollected by those who share the culture. However, there were cases when subjects in both groups failed to recall some of the culturally related ideas. In addition, the text structure affected the quantity and quality of information recalled by both groups.

Six Egyptian and Danish subjects participated in the second phase of the study. This time subjects read the same passages in a think aloud manner. Their talk was recorded and then transcribed. Data analysis confirmed the above finding that prior knowledge of the topic aids comprehension. It was also evident that the think aloud technique played a significant role in facilitating subjects' overall understanding and encouraged more elaborations on cultural aspects of the text. The results also showed that subjects used different strategies to construct main ideas but the extent to which they could use these strategies was limited by the text structure and the information presented in it. The examination of the two case studies indicated that students relied on their linguistic skills to understand the passage when the topic is unfamiliar to them. The organization of the text and unfamiliarity of the content affected the quality of their predictions. The tendency was to provide general expectations rather than predicting specific ideas.

Chapter 1

Introduction

1.1 CONTEXT OF THE PROBLEM

1.1.1 BACKGROUND KNOWLEDGE AND READING COMPREHENSION

Education is sometimes looked at as the acquisition of the art of the utilization of knowledge (Whitehead, 1929) and one of the primary ways in which we acquire and utilize knowledge is via communication. Nowadays, the advanced technology and the increased complexity of social organization make the communication of information more crucial than ever. Language and its linguistic modes (i.e. speech, reading and writing) underlie the very structure of communication. Despite the advanced methods of communication, the written word still plays a very important role. Bormuth (1978) concludes: "Although we have developed many other media for communicating some of this information, the written word has borne and continues to bear a large fraction of the load" (p.157).

Since much of what is learned in schools is communicated through texts or presentations and discussions, educators have been interested in studying learning from reading and listening to prose. This dissertation focuses on how Danish and Egyptian high school students comprehend written language in exposition. Egyptian and Danish educational systems, among others, frequently focus on written language and its interpretation. In language programs, students are taught and assessed based on their ability to comprehend the printed word. Obviously, the printed word takes priority as a quantitative indicator of both language and reading comprehension competency.

Background knowledge of both content and structure of texts assist in this comprehension, particularly in reading classes where students are expected to activate their existing knowledge and identify the overall organization of the text in order to understand the author's message. In order to comprehend written material, the reader must have schemata for defining the purpose of reading, identify the organizational patterns of the material, and interpreting the key concepts. All of this is part of background knowledge.

In recent years, considerable attention has been given to the role of background knowledge in second language reading comprehension. Psycholinguistic research has shown that our understanding of something depends mainly on our past experiences. Schemata theorists believe that the comprehension process is an interaction between the reader and the text. The text alone does not carry meaning. It is not enough to rely on one's linguistic competence which is actually considered part of one's total background knowledge. New ideas and new information can only be meaningful if one can relate them to a past experience. Empirical research based on schema theory provide evidence that

during the reading process, the new information in the text is related to and compared to the old information gained from the reader's prior knowledge of the world.

Research on the effect of background knowledge on comprehension in the first language conducted during the 1970s encouraged second language researchers to study the same phenomenon. The studies by Bransford and Johnson (1972), Stenffensen et al (1979) and Anderson et al (1977), among others, have shown that prior knowledge aided comprehension and since then L2 reading comprehension research has been undertaken to investigate the effects of the knowledge that the learner brings to the text. Background knowledge has been operationalized in a variety of ways: cultural knowledge; religious knowledge; vocabulary knowledge; technical knowledge; topic familiarity and contextual visuals.

Meyer (1975) suggests that certain text types influence reading comprehension and recall. She recognizes five types of discourse that could affect students' recall of expository texts : collection, description, time order, cause-effect, and comparison-contrast. According to her, the cause-effect and comparison-contrast are well organized forms while the collection of descriptions is the loosest type. In her studies, students recalled more idea units from well organized texts than they did from texts that are poorly structured. So background knowledge of the rhetorical organization of a text facilitates comprehension and recall.

Previous research on reading comprehension has focused attention on two perspectives : the structure of the text and the world-knowledge that the reader brings to understand the text. The studies conducted on both areas have been criticized for the inconsistent findings that they provide. They also failed to explain how readers acquire such world knowledge. The interaction between the knowledge the reader brings to the text and the structure of the text itself has been ignored by many researchers. The focus was only on one or the other. We know little about the processes that L2 populations use to monitor or evaluate their comprehension and repair gaps in comprehension, or about the cues to which they attend in this evaluation and regulation process. These conflicting findings in previous research need to be reviewed in terms of the interaction between the two variables. As Cathy Roller (1990) stated "combining these two perspectives by focusing on the interaction between knowledge and structure variable might bring some order to the massive body of conflicting research" (p.81).

Carrell (1984,1987) who has been involved in the study of the effect of content and formal schemata on comprehension reports that evidence from the previous research provides support for the hypothesis that reading texts with familiar content should be easier to read and comprehend than texts with unfamiliar cultural content. She also reports that reading a familiar content in familiar rhetorical form should be relatively easy and reading an unfamiliar content in an unfamiliar rhetorical form should be relatively difficult. There is no clear evidence of the influence of text structure variable and background knowledge of the other possibilities : reading a familiar content in unfamiliar rhetorical form, reading an unfamiliar content in a familiar rhetorical form or reading an unfamiliar content in an unfamiliar form. Carrell calls for research which examines such possibilities and the simultaneous effect of both content and form on ESL readers. This research should also investigate the extent to

which structural features might influence reading comprehension particularly when prior knowledge conflicts with information presented in the text.

Carrell suggests that more research on the effects of different kinds of rhetorical organization on both ESL and EFL readers is called for. She also believes that further research on the combined effects of content and form in ESL reading comprehension is needed to examine other types of proficiency levels, other cultural groups and other types of manipulation of the content and form. This study examines the effect of background knowledge on reading comprehension of Egyptian and Danish high school students. More specifically, this research examines whether cultural background knowledge of the content affects understanding and recall of a collection of descriptions text type. In other words, the research will try to answer the following questions: will the Egyptian students recall more of the Egyptian related text than the Danes and vice versa? And how much will they recall from both texts on Egyptian and Danish festivals? Does text type (collection of descriptions) affect the amount of recall? And what strategies do Danish and Egyptian students adopt to understand and recall such type of text?

The research on the effect of content and formal schemata and their simultaneous effect will contribute to the development of reading material and preparation of teachers of reading. As teachers of reading, our main objective is to minimize reading difficulties and maximize comprehension. In order to do so, the components of both content and formal schemata will be taken into consideration when teachers design reading material for ESL learners. Topics and activities relevant to students' background could be provided to facilitate both the learning and teaching process. On the basis of schemata theory, students will have the opportunity to suggest what kind of material they want to read. Participating in selecting the reading material, ESL students will enjoy the reading class and eventually apply the appropriate schemata. Teacher training will also be reviewed to provide appropriate training for ESL teachers of reading. Teachers will be expected to be well informed about topics related to the students' background knowledge. They will be seen as "teachers of relevant information as well as reading skills." (Carrell, 1987: p.477).

1.2 STATEMENT OF THE PROBLEM

The reading and comprehension of texts is a very complex activity. Given the fact that there are several, often widely differing, types of texts, it is unlikely that every text is mentally processed in exactly the same way. Indeed, how we read a text may depend on the genre of that text and on our goals. Although it stands to reason that a single text may be processed in different ways, it is still plausible to assume that there is a certain regularity in the way a given text type is approached. In all text comprehension, there are basic operations that are being carried out: letters are decoded, sentences are parsed, words assigned meaning, anaphora resolved, inferences drawn, gists constructed, and so on. The question to be asked is: how can researchers and reading specialists resolve the paradox that the same basic procedures give rise to different types of comprehension, particularly in the L2 reading field.

A plausible candidate for this is the idea that for each text type, proficient readers have developed a particular cognitive control system, which guides their comprehension efforts. That is, the control system is in charge of regulating the basic operations of text comprehension. It can do this by emphasizing some processes and de-emphasizing others. Thereby, it may give rise to a distinctive pattern of cognitive behavior.

As the body of literature concerning schemata theory grows, the need for thorough investigation of the cultural background knowledge and rhetorical organization of texts (content and formal schemata) and their simultaneous effect on reading comprehension increases. From previous research, we notice that studies elucidate on the effect of content schemata of first and second language reading, comprehension. Barnitz (1986) states “ while much research is conducted on first language reading, a need exists for investigation of the effects of cultural and linguistic differences of schemata and text structure on reading comprehension of second language learning” (p.96).

Early analyses of reading seemed to assume that once readers could decode accurately and fluently, comprehension would automatically follow. Even when this assumption was found to be false, efforts to improve comprehension focused more on product than process. Pupils were asked to answer questions about directly stated facts and infer answers from written material without considering how to achieve such understanding. A vocabulary pertinent to a given selection might be taught, but the learner was rarely taught how to comprehend the text in general. Because pupils were given feedback on accuracy of their performance in answering questions, the instruction was more comprehension practice with delayed feedback than instruction in how to comprehend.

Further, previous research on text structure has focused on students’ understanding of well organized texts and the strategies they use to remember and recall the information presented in these texts. This research ignored the processes which students go through to understand and comprehend the poorly structured expository texts. Although it touched on the difficulties students encounter when studying such texts, it did not tell us about the processes which are involved in the comprehension and recall of these loose texts.

Therefore, more studies, similar to this one, are needed on the role of schemata in L2 reading comprehension. These studies should explore the influence of other background knowledge and text structure variables on reading comprehension of other cultural groups. They should also examine other reading strategies adopted by ESL/EFL students when reading different types of expository texts. The text features that may cause comprehension difficulties should be of concern to ESL/EFL reading research. The goal should be to minimize problematic text features and consider how readers construct a representation of the new information. It is important to find out what kind of meaning reading has for different readers and observe what students do with a diversity of materials in many different situations, i.e., prior to reading, during reading and subsequent to reading.

The present study seeks to extend the research conducted by Carrell and Meyer to younger learners. Both Carrell and Meyer studied adult learners, typically students in college. Research needs to be done to determine if cultural background knowledge and text structure also affects younger students’ comprehension. Equally important, research needs to be carried out to identify how the kind

of text influences the reader's recall (both quantity and quality). Meyer (1975) suggests that when reading a poorly structured text, the learner gets confused which is a main idea and which is a detail and this sometimes results in poor comprehension and recall.

Further, the study examines whether EFL students use different cognitive strategies when they read poorly structured passages under a specific condition. In this study a group of students read the passages using the think-aloud technique. So, the study attempts to examine the strategies they used to comprehend and predict information that relates to their cultural background and whether this technique helps them make accurate predictions. In addition, the current study tries to find out if their recall differs from that of other students who did not use the think aloud technique when they read the passages.

Reading comprehension as process involves actively constructing meaning among the parts of the text and between the text and personal experience. The text itself is but a blueprint for the creating of meaning. Comprehension and retention are enhanced by strategies for relating text with personal knowledge and experience.

1.3 RESEARCH HYPOTHESES AND QUESTIONS

This study consists of two parts. In the first experiment, students read and then recall two passages, one represents their own culture and the other is considered a far distant culture. Data gathered in the recall process will be classified in terms of 2 culture groups : the Danish group and the Egyptian group each of which will be exposed to the two passages on Fastelavn festival in Denmark and Shamm en-Neseem festival in Egypt. Students' recall was scored on the presence or absence of idea units (T-units) in the text. The two groups will be given a gap-filling test . The deletion of items is based on the cultural aspects of both texts. In the second part of this study, six students representing the two cultures will read the same passages using the think aloud method. Data gathered from this experiment will be transcribed and analyzed. Two case studies will be discussed each of which represents the Danish and Egyptian cultures.

The following are the hypotheses of the study:

1. Egyptian students will recall more of the Egyptian related text (Shamm en-Nessem festival) than Danish students.
2. Egyptian students will perform better on a gap-filling exercise of the Egyptian related text than the Danish students
3. Danish students will recall more of the Danish related text (Fastelavn festival) than Egyptian students.

4. Danish students will perform better on a gap-filling exercise of the Danish related text than the Egyptian students.

These expectations are based on the notion that it is easier to read and comprehend texts with familiar content than texts with unfamiliar cultural content (Carrell, 1987). Also, on the gap-filling exercise students are expected to write the missing items that represent their own culture.

5. Egyptian native speakers will be able to make more accurate predictions relating to the Egyptian text than Danish native speakers will be able to make relating to the Egyptian text.

6. Danish native speakers will be able to make more accurate predictions relating to the Danish text than Egyptian native speakers will be able to make with reference to the Danish text.

As previously stated, comprehension is an active process and part of this process is the ability to make predictions about a given text in order to integrate the text into prior knowledge (Blachowicz, 1983; Hansen, 1981). Hypotheses 5 and 6 are based on the assumption that readers can make accurate predictions about meaning if they have more information about the subject matter of the text. The reader first makes a prediction about the meaning of the text. This prediction about meaning is based on the reader's knowledge of the world and what he or she has already read of the text. Better knowledge of the sequential constraints of the grammatical system and written conventions will better enable readers to convert their meanings into hypothesized graphic forms, to be checked against samples of the text. According to Goodman (1982) and Smith (1982), the reader only samples; that is, the reader notes only enough of the text to confirm the guess. If the subsequent text makes sense, the reader assumes the guess is correct. If subsequent text does not make sense, the reader "regresses" and makes another prediction.

Danish and Egyptian students are expected to make accurate predictions relying on the cultural content and the implicit information in the texts they read. Each group may be able to make the correct predictions of the cultural events of the festival which students are familiar with. In the think aloud experiment, it is expected that this technique may facilitate the ability to predict since students reflect on what is being read.

7. Item analysis (T-units): it is predicted that items that are closely related to cultural aspects of the text will be best recollected by those who share the culture.
8. More sophisticated/cosmopolitan subjects will score better than unsophisticated/less traveled subjects on the culturally-related items.

9. Students' recall will be affected by the structure of the text (collection of descriptions). It is predicted that students' written recall protocols will be shorter than expected and lack quality T-units (i.e., main ideas vs. details).

It is reported throughout the literature on text structure that with poorly structured texts students can not determine whether an idea is considered a main one or peripheral information. They may not recall a main idea thinking it is not important and this results in poor and short recall.

10. Prior knowledge will affect main idea construction: readers who lack knowledge of the content domain will rely on other strategies rather than constructing the main idea automatically.

The above hypothesis is based on Afflerbach's (1990) assumption which suggests that main idea construction is not always automatic, readers use other cognitive strategies especially when they encounter difficult and unfamiliar texts (see chapter eight for further discussion).

The free recall experiment will examine hypotheses two, four, seven, and eight while the think aloud experiment will focus on hypotheses five, six, and ten. The other hypotheses (one, three, and nine) will be discussed in both experiments since they represent the major hypotheses of the whole study.

In the light of the above hypotheses, the study will explore the influence of the cultural background knowledge on comprehension and recall and more specifically, it will attempt to answer the following questions:

1. Will the learners' cultural background knowledge help them comprehend and then recall all activities and events associated with the familiar festival?
2. Does the text type (collection of descriptions) affect the quantity and quality of information recalled from text?
3. Which element has a stronger effect on recall: cultural prior knowledge of the content or text type or both?
4. Does students' recall in the think aloud condition differ significantly from that of the written recall protocols? In what way does the nature of the technique affect the students' recall?
5. Will students use specific strategies to comprehend the collection of descriptions text type or will they simply list events?
6. What kind of strategies do they use to construct a main idea?

7. Will students make accurate predictions simply because they belong to the culture? Or are there any other reasons, i.e. the nature of the procedure used?
8. Will traveling experience and having foreign friends influence students' comprehension of the texts on festivals?

CHAPTER 2

DISCOURSE AND TEXT TYPES

2.1 INTRODUCTION

Many linguists, psychologists, and reading specialists look at reading comprehension as an interaction between reader and text by which meaning is created. So, it is important to study aspects of texts and textual factors that influence comprehension as well as the reader's approaches and cognitive processes that he/she adopts during comprehension of texts. Moreover, it is of great importance to examine the interactive process in which readers use their experience to react to the message which writers try to convey via print.

The purpose of this chapter is twofold. First, it throws light on the notions of text and context, their definitions and relevance to the comprehension process. Text factors play a crucial role in reading comprehension. Research has shown that language exists at two distinct levels, surface and deep structure (Chomsky, 1957). Of course, this distinction has some important implications for understanding the reading process (Smith, 1978). The deeper a person processes text, the more he or she will remember and understand it. It is also claimed that the context in which reading occurs influences what will be recalled (R.C. Anderson and J.W. Pichert, 1978).

The second purpose is to discuss text types and their organizational patterns. This is of important relevance to the current study since it examines the effect of text type on the quantity and quality of recall of EFL readers. It also focuses on the reader's prior knowledge of text structure and the extent to which this knowledge facilitates his or her reading comprehension. Students' comprehension of a given text depends mainly on the type of text presented and the kind of prior knowledge the reader brings when reading such text. Several researchers have shown that some students are aware of structural patterns in expository writing, whereas other students are not. Importantly, these differences in awareness of structural patterns have correlated with differences in the type and amount of information students recall after reading expository text (Meyer, Brandt, & Bluth, 1980; Taylor, 1980; Taylor & Samuels, 1983)

2.2 DISCOURSE STUDIES

The analysis of discourse has inspired a vast amount and variety of work in the last two decades. In discourse analysis, which is concerned with language above the sentence level, several different approaches have been adopted. Some of these approaches, namely the micro and macro approaches, are concerned with the size of unit under investigation. Researchers who follow the micro approach mainly

focus on the sentence and its modification and relation with other sentences (van Dijk, 1977). Texts used in this kind of research (theoretical or descriptive) were of limited length and decontextualized examples. On the contrary, the macro approach focuses on the analysis of complete texts, which may be of considerable size. Based on this approach, different discourse models have been modified and developed. In some of these models, the text is broken into hierarchies of discourse units some of which are located high in the structure while others are low. This hierarchy is important in understanding and recalling the text (Meyer, 1975). Some of these models will be discussed in detail in the next chapter.

The terms “text” and “discourse” are often used interchangeably. The nature of the distinction between text and discourse has occupied many researchers. Some writers believe it is crucial to distinguish between the two terms while for others it is not an important issue. Generally, words such as discourse, utterance and conversation are used to refer to spoken language. The word “text”, in contrast, is used to refer to written language. In this thesis, the term “text” will be used because it seems to be less often applied to oral expression while “discourse” seems to be applied more often to oral expression.

The term discourse, as currently used, covers two areas of linguistic concern: the analysis of dialogue—especially of live conversation— and the analysis of monologue. In the parlance of many, discourse covers the former, and for at least some of us, discourse covers the latter. Actually, the two matters—analysis of dialogue and analysis of monologue—are separable but related concerns. Discourse analysis can properly be applied to both. As has been pointed out before, the present study focuses on the analysis of monologue.

2.3 TEXT

The study of texts has attracted a number of researchers from different disciplines such as rhetoric, stylistics, literary studies, anthropology, sociology, discourse analysis, philology, descriptive linguistics, and so on. The term “text” has been used in various ways, including a cognitive sense in which it refers to a mental representation of what is said (e.g. Webber 1979), and a linguistic sense in which it refers to passages of sentences that “form a unified whole” and exhibit semantic cohesion (Halliday and Hasan 1976). Briggs and Bauman (1992) and Bauman and Briggs (1990) also discuss how our cultural conceptions of “text” are intertwined with genre, social power, context, and intertextuality. In the next section, we will throw light on some of these definitions and their relation to the current study.

Although the term “text” is not easily defined, the need for a reasonably satisfactory working definition or characterization of it is crucial to any study of text. Text is roughly being defined as sentences in combination that could be studied independently from its context. One of the traditional linguistic approaches claims that texts can be investigated and explained in isolation from their environment as the “physical realization of some semantic unit of discourse” (Kantor, 1977, p.6, cited in Stoddard, 1991, p. 9) or “ a concrete and analyzable linguistic entity ...spoken or written ...” (Simmons

1979, p.10, cited in Stoddard, 1991, p. 9). Although this position rests upon the fact that the physical text is the most concrete entity available to us for analysis, we know for sure that a text is not a static entity; it is more than the tangible realization of a physical text. For example, when we reread passages, we rarely interpret them exactly the same way the second, or even the third time. Thus our perceptions of text meaning are changeable.

It is often claimed that a text is a sequence of sentences. Lyons (1995) argues that this definition can only be acceptable if "sentence" means what he calls "text-sentence". He believes that some sentences of a more formal character would definitely satisfy the definition. But the definition suffers from serious deficiencies one of which is its failure to make explicit the fact that the units of which a text is composed, whether they are sentences, or not, are not simply strung together in sequence, but must be connected in some contextually appropriate way. The text as a whole must exhibit the related, but distinguishable, properties of cohesion and coherence. In an attempt to draw distinction between what is meant by "text" and "a text", John Lyons concludes:

"What are commonly referred to as texts, whether written or spoken, are deliberately composed by their authors as discrete wholes with determinate beginnings and ends and they are more or less readily divisible into text-units, some of which (though not all) can be classified as (text-) sentences. Moreover, longer texts, such as novels or plays, can usually be divided hierarchically into larger and smaller whole units (chapters and paragraphs, or acts, scenes and speeches), each of which is internally cohesive and coherent and can be analysed into smaller, sequentially ordered, units: chapters into sequences of paragraphs, paragraphs into sequences of (text-) sentences, and so on."

Some researchers consider "text" to be language that is functional. The text should be considered from two perspectives, both as a product and as a process. Halliday and Hasan (1976) summarize their view by claiming that a text is a passage of discourse which is :

- a semantic, not a grammatical unit
- encoded in sentences, but not structurally related to them
- related to context of situation but a consistency of register
- reasonably homogeneous and thus consistent across all texts
- characterized by certain linguistic features which are the basis of cohesion in the text and thereby give it texture
- not defined by size.

Based on this view, a text is a semantic unit and it is not something that can be defined as being just another kind of sentence, only bigger. The text is an instance of the process and product of social meaning in a particular context of situation. What they mean is that it is an output that can be recorded or studied. It is something which has a certain construction that can be represented in systematic terms. They also refer to the continuous process of semantic choice, a movement through the network of meaning potential, with

each of the choices constituting the environment for a further set. On the surface, Halliday and Hasan's definition seems contrary to a holistic view of text because it indicates that form is separated from meaning. Nevertheless, it does show how "text" and the physical text differ and conveys the necessary aspects of communication.

The communicative aspect has to be emphasized when talking about the notion "text". Reading a text is far more than the realization of the surface structure of the text, i.e, cohesive markers and other linguistic signals of semantic and discourse functions. De Beaugrande's (1980,1984) model of text processing focuses on this communicative element. He sees the text as a naturally occurring manifestation of language, i.e. as a communicative language event in a context. For him, the surface text is the set of expressions actually used; these expressions make some knowledge explicit, while other knowledge remains implicit, though still applied during processing. The work of De Beaugrande and Dressler (1981) is central to the study of text since they acknowledge the communicative purpose of texts. They define text as "communicative occurrence which meets seven standards of textuality {cohesion, coherence, intentionality, acceptability, informativity, situationality, and intertextuality}" (p. 3). This notion of "text" is, indeed, complex because we still know very little about the complexities of mind and the reader's mental processes, e.g., how the eye-brain combination attends to and understands printed texts. But at least this definition emphasizes the communication between reader and text and allows for further examination of the role of textuality, particularly cohesion and coherence.

Certainly, making sense of a text is an act of interpretation that depends as much on what we as readers bring to a text as what the author puts into it. Understanding a text is an active process of constructing meaning from the signals that a writer provides. And composing a text is an active process of constructing meaning for a text and using textual cues to signal meaning to readers. If the writer intent and the reader interpretation coincide perfectly, ideas will be transferred from one person (writer) to another (reader) and comprehension will occur. In order for the interpretation to happen the reader needs a set of procedures to access the necessary resources of the system (assuming that language is a system and when the system is in use it is being actualized and activated). The mental activities involved in the interpretation process and the role that readers play is the focus of the procedural approach to the analysis of texts. The role of the reader in actively building the world of the text is crucial to the comprehension process. The reader relies on his/her experience of the world and how states and events are characteristically manifested in it. To put it another way, the reader has to activate such knowledge, make inferences and constantly assess his/her interpretation in the light of the situation and the aims and goals of the text as the reader perceives them.

One of the definitions that focuses on the synergism of texts and the realities of text processing is that of Sally Stoddard who defines text as "the mental model constructed by a reader using as input data a physical text (which is the representation of the mental model constructed by a writer.) This characterization, which allows for reader idiosyncrasy, is the only one possible-given, on the one hand, the

inaccessibility of the writer's mental model and, on the other, the fact that textual synergism is dependent on reader interpretation" (p.96).

This definition considers the text to be a state of mind. It looks at the relationship between the reader, writer and the text from a different angle. It examines one aspect that has been ignored by many other definitions; that is, the variability of interpretation by readers of a written text. This includes interpretation by one reader on several readings of the same text and interpretation of more than one reader of the same text. Both writers and readers form their own mental models: the writer's text and the reader's text. The physical text is the product of the writer's thinking and intentions. Once the writer constructs his/her mental text he/she transcribes it in a tangible physical text form and this is when readers can have access to the writer's ideas. Readers also construct their mental model of text while reading words on a page. They try as hard as they can to construct "text" out of what they read. This can only be done by (a) employing the reader's interpretive competence and (b) by exploiting the physical text which is the only source available to deeply understand the writer's mental model.

Again, this approach to text analysis is concerned with "text as process". Our understanding of textual synergism requires that we first understand how readers interpret physical texts produced by writers since readers don't have the same mental capabilities or world knowledge. There is no doubt that textual synergism is influenced by the contribution of the writer's input to the reader but our knowledge of how much variation actually exists as readers process texts will greatly enhance our understanding of the role textual synergism plays in comprehension. We have to examine the direct or indirect effect of a writer's input on readers' interpretations since the physical text is the only available source to understand the writer's creative ideas.

Research on reading comprehension has been concerned with the aspect of interaction between learner and text (Kintsch and van Dijk, 1978; Frederiksen, 1977). This research centers around how the reader constructs a mental representation of text similar to that intended by the writer. It also focuses on dimensions of text which affect the building of these cognitive representations by readers. Following this approach, a text is not just a series of sentences or paragraphs precisely because it follows a hierarchy of content, so that some facts or statements are superordinate or subordinate to others. It seems plain that the process of creating such a hierarchy must be governed by writing plans. But it is not at all plain how writers and readers form and implement plans, and whether in dealing with the same text they are following the same plans (Meyer 1975, 1977; Meyer, Brandt and Bluth, 1980).

This approach to text analysis sees the communication between writer and reader as a process that involves a dual problem-solving task. On one hand, writers use their knowledge about topics, audiences, and writing plans in order to best satisfy the goal for a particular writing task. The resultant text is a subset of the cognitive representation in the mind of the writer. Readers, in turn, are expected to apply their world knowledge and knowledge of writing plans to build a similar cognitive representation. Meyer's research has focused on how prior knowledge about writing plans is utilized by readers as they try to

resolve this problem-solving task. Her results show that different types of organizational plans affect expectations differentially during reading as well as affect search plans during retrieval. Further discussion of Meyer's model of text analysis will be presented in the next chapter.

2.4 TEXT AND CONTEXT

In the introduction of his book "The Grammar of Discourse", Robert E. Longacre (1983) emphasized the importance of context by saying: "As a book on discourse, this volume is dedicated to the thesis that language is language only in context. For too long a time, linguistics has confined itself to the study of isolated sentences, either such sentences carefully selected from a corpus or, more often than not, artfully contrived so as to betray no need for further context. Thus, boards in the linguistic classroom have been filled with such sentences as "John kissed Mary" or "Stephen knew that Mary knew that something was wrong" to the avoidance of such sentences as "Consequently, he kissed her" or "Obviously he knew that Mary knew that something was wrong." Sentences have been discussed and dissected as to possible multiple meanings and ambiguities without taking into account the natural function of context in resolving most ambiguities" (p. xv).

We know that all human experience is context dependent and human behavior can hardly be interpreted without context. So, context is a necessary and natural part of human functioning. Such is also the case in reading. In the field of reading comprehension, it is common to say that the meaning of a word depends upon its context. Although this is almost true, we need to remember that context has other dimensions which should be considered. The situation in which reading occurs is context. The reader as a person with prior experience constitutes context. So, too, does the purpose for reading.

It is important to note that the way into understanding language lies in the study of texts and their nature. Obviously, when we write a text it looks as though it is made of words and sentences but, in fact, it is made of meanings. As has been discussed above, text and context are complementary: each presupposes the other. There is text and there is other text that accompanies it : text that is "with", namely the con-text. This notion of what is "with the text", however, goes beyond what is said or written: it includes other non-verbal goings-on-the total environment in which a text unfolds. So, our understanding of text depends mainly on the situation in which texts actually occur and the context in which they are to be interpreted. Thus, texts are constituents of contexts in which they are produced; and contexts are created, and continually transformed and refashioned, by texts that speakers and writers produce in particular situations.

Although discourse analysis is concerned with the relationship between text and context, it is difficult to give a definition of the notion of context that covers all the approaches to discourse. In fact, it is the consideration of context that most clearly differentiates these approaches. In this discussion, I will refer to two concepts that are relevant to our study of the nature of this relationship; the context of

situation and the context of culture. The two concepts were first introduced by Malinowski (1923) who considered them to be very necessary to the adequate understanding of the text. These notions were further developed and modified by other researchers such as Firth (1935) and Hymes, (1967). The context of situation is simply the environment of the text; it is the immediate environment in which a text is actually functioning. In order to understand the relationship between the text and its environment, language learners usually use their prediction skills to reach their ultimate goal, that is, full interpretation of the material they read or listen to. They have certain expectations of what is coming next when reading or listening to a particular passage. This prediction skill is essential in this learning process simply because the main theme of this passage may be missed if the reader or listener does not bring to it appropriate assumptions derived from the context of situation. The failure to understand the main ideas in a given passage may be attributed to the failure to use context in this predictive way.

Malinowski also indicated that if we seek an adequate description of the interaction process, it is not enough to know what is going on at the time but we need to provide information about the total cultural background. The cultural aspect plays a significant part in the interpretation of meaning. The context of situation is just the immediate environment surrounding the event. When language is in action, we need to consider the broader background against which the text has to be interpreted; the cultural background of the participants and activities in which they are involved.

The close relationship between text and context leads us to say that the text creates the context as much as the context creates the text. The construction of "meaning" comes from the friction between the two. This means that part of the environment for any text is a set of previous texts, texts that are taken for granted as shared among those taking part. In general, acts of literacy are performed in complex, multidimensional contexts; i.e. sociocultural, and historical context. But learning from text is also affected by a more immediate situational context. According to Spiro (1980), discourse is embedded in contexts, which influence "extra-textual" construction. The meaning constructed for a text is affected by other texts, written and spoken, that precede or follow it. Reading involves "reading" this context, which includes the time and place of the act and the nature of the task and also the other people who are involved. Briefly, reading the situational context often means "reading" other people. For example, research has shown that some students can predict quite well the content that their teachers will emphasize in discussions and exams when reading texts for them (Alexander, Jetton, Kulikowich, & Woehler, 1994). Other research suggest that the reading of context also mean "reading" the people with whom one discusses the text or people who comment about the text. The results of Ruddell and Unrau, (1994) study indicated that students' understandings for texts were influenced by the teacher's comments as well as comments by other students in whole-class and group discussion.

Other studies have been conducted to examine the effects of contextual variables (Pichert and Anderson, 1977; Zwaan, 1993). These studies show that people, when given the task of reading from a particular perspective, would "see" a text from that perspective. Different perspectives will result in

different readings. Anderson and Pichert (1978) demonstrated that students interpreted passages differently when given different perspectives- those of a homebuyer and a burglar. The “homebuyer” learned and remembered information relevant to the problems of living in a home. The “burglars” learned and remembered information related to security, such as location of doors, lights, and windows. Apparently the perspective activated particular schemata. In Zwaan’s study, participants who were told that they were reading a literary text recalled better but needed longer time. As for the newspaper reading there was more inferencing of goals, reasons for actions, and causes. The newspaper reading presumably required such connections for sense making, whereas the literary reading did not require the same kind of understanding.

The basic goal of reading is making sense of what is read and therefore the situational context is crucial to the construction of meaning. How a reader approaches a text, definitely affects his/her interpretation of such text. According to van Dijk (1979), the situational context can override the textual influence: if a task is interpreted as requiring a particular kind of reading, a reader attempts to build meaning to accommodate that interpretation when reading the text and might not follow the writer’s guidance to the extent that he or she might in other circumstances. The “effort after meaning” is an effort to make the meaning fit the contextual cues that are perceived as well as the textual cues (Graesser et. al., 1995).

The foundation of useful research is to view texts and discourse as dynamic events. Instead of just classifying items, we need to find out how items are chosen and used in real contexts. Processes must be orderly because people understand each other quite well most of the time. The text is thus not defined merely by its format and word-meanings, but its functions in human interaction.

2.4 READING AND CONTEXT

Reading teachers have always been concerned that some of their students are not reading for meaning. Although the skill in decoding and skill in reading comprehension go hand in hand, some good decoders are poor comprehenders. Their failure to comprehend material is probably due to their obsession with reading for accuracy such that they forget to read for meaning. Smith (1978) states that “ overconcern with accuracy has the effect of directing too much attention to individual words .. making comprehension .. impossible” (p. 139). The study of the relationship between vocabulary learning and reading comprehension has long been studied by researchers from different fields. In the following section, I will discuss the role of context in constructing word meaning and the relationship between vocabulary and reading comprehension. The relationship between context and other aspects of reading will be addressed in chapters three and four which focus on models of reading comprehension.

Many investigators in reading education stress the importance of readers’ use of context in interpreting and verifying the meaning of words and sentences to be comprehended. Traditionally,

vocabulary knowledge is believed to affect reading comprehension. In order for our students to understand what they encounter in print, they need some understanding of the words that make up the text. Davis (1944) found that there is an association between vocabulary knowledge and reading proficiency. This early finding still makes sense. Students who know many words and understand many concepts are thought of as good readers. Our knowledge of words grows as we continue to read. When we read, we encounter new ideas, concepts, and words, and we see existing ideas, concepts, and words in new ways. Anderson and Freebody (1981) indicate that readers' knowledge of words is one of the most potent predictors of their reading comprehension.

Word meaning is often dependent on the context in which it is used; for this reason, skill in utilizing clues in the surrounding text to arrive at word meaning is an essential skill for all readers. Readers use the meaning of the passage and sentence as well as their own knowledge about the world to predict unknown words. Context consists of utilizing surrounding words in sentences or larger units of discourse to identify unfamiliar words. Allington and McGill-Franzen (1980) suggest that the appropriate use of context leads to more effective processing and overall accuracy in recognizing unfamiliar words. It is in combination with readers' experiential background that the analysis of context provides meaning to the semantic subtleties of print (Anderson and Ortony, 1975). Getting meaning from context is the major tool at the command of readers. It involves using information surrounding a troublesome word to help reveal its meaning. Every reader makes some use of context automatically. Instruction is needed, however, in cases where the author provides a deliberate context to help the reader with content area terminology that is especially difficult.

Cues from context-semantic and syntactic- are very powerful clues to the meanings of unfamiliar words, and using such clues decreases the strain on the reader's short-term memory as printed information is processed. Additionally, the use of context also enables readers to use two strategies basic to deriving meaning from print-informed guessing and self-monitoring. Readers make informed guesses, or predictions, concerning unfamiliar words in print by using their language knowledge and experiential background. Readers continually monitor their informed guesses by checking them for syntactic and semantic acceptability in context.

Context analysis is mostly a matter of inference. Inference requires readers to see an explicit or implicit relationship between the unfamiliar word and its context or to connect what they know already with the unknown term. It can't be assumed that students will perceive these relationships or make the connections on their own. Most developing readers just don't know how to efficiently or effectively use a deliberate context provided by an author.

Recent research emphasizes the role of active processing in comprehension (Beck, Perfitti, & McKeown, 1982). Reading is viewed as a complex process consisting of a variety of concurrent, interacting subprocesses. This research suggests that reading instruction should consider the lexical as well as the semantic aspect of comprehension. In order for reading instruction to affect comprehension, it may

need to go beyond simply establishing accuracy of associations between words and definitions. Empirical evidence has shown that instruction which aims at context interpretation improves retention. What is meant by the context interpretation is the ability to incorporate a word's meaning into the surrounding context to develop an appropriate representation of the context as a whole. By encouraging students to actively generate information, we help them to build semantic network connections between new and prior information. The study by Beck et al, (1982) also suggests that comprehension is affected by deep processing because the number and variety of connections that are formed facilitate access to components of word meaning that are relevant for the variety of contexts in which a word might be encountered.

Beck and his colleagues consider the semantic processes involved in reading comprehension to require three basic components : (a) fluency of access to word meanings (b) richness of semantic network connections, and (3) accuracy of word-meaning knowledge. From the discussion above, we can speculate that the semantic processes involved in reading comprehension should be considered when designing instruction. One of the goals of such instruction is to provide learners with explicit help to integrate the word's meaning within a context. Successful vocabulary instruction has certain features that are believed to improve comprehension, among which are the amount of practice, breadth of information about words, and activities that encourage active processing of information. Semantic mapping, semantic features analysis and passage integration are among the instructional techniques which engage active processing. All of these activities have one thing in common; that is, they do not merely call for entering new information in memory. Rather, students are required to use information by comparing it to, and combining it with, known information toward constructing representations of word meaning.

The assumption that students' ability to derive word meaning from context can be improved leads us to suggest that we, as reading teachers, should teach them how to use context effectively. Although the ability to use contextual information is significant, students need to realize that context may reveal a little or a lot about a word's meaning and to recognize when information should be considered tentative or incomplete. The problem students encounter in their reading classes is that natural texts do not reveal sufficient clues and thus training as such is necessary to increase their awareness of the nature of the reading process and help them look for other useful strategies. The use of reading strategies in comprehending expository texts will be addressed in the pedagogical section of this thesis (chapter 9)

2.4 TEXT TYPES AND TEXT VARIETIES

Many researchers agree that reading comprehension is a flexible and active process which is influenced by many factors. The reader's purpose and the function and nature of the type of information being read are among these factors that affect the reading processes. Readers may read for enjoyment or for information as a result of their interest (readers may prefer reading a novel to reading a newspaper report) or their educational objectives (students at schools may want to read certain material of their

choice or a teacher may assign a particular text to them). So, in whatever reading circumstances, text type and the kind of information being read strongly affect the comprehension process. Nowadays, people encounter a plethora of texts which need to be glanced at, skimmed, carefully read or interpreted in depth. Needless to say, it is unlikely that every text is mentally processed in exactly the same way; how we read a text depends on the genre of that text and on our goals.

Research on discourse topology has shown that characteristic of individual discourses can be neither described, predicted, nor analyzed without resort to a classification of discourse types. It is pointless to look in a discourse for a feature which is not characteristic of the type to which that discourse belongs (Longacre, 1976). There are several, often widely differing, types of texts which our students encounter during their reading sessions. These texts are processed in a variety of ways based on their genre. For instance, a news story is typically read to acquire information about the real world while a manual is read to acquire information about actions to successfully perform a given task. It is true that not all monologue discourses are of the same sort. Of course discourses such as newspaper reporting of events, first person accounts, novels, short stories, fairy tales, scientific papers, essays, historiography, food recipes and do-it-yourself books differ in ways more or less obvious. Although each type has its own distinct features that distinguish it from other types, there are similarities between some of these discourse types, e.g. the novel, short story and fairy tale, are all types of story-telling. Moreover, some of these discourse types are looked at as broad categories rather than specific types (within the novel itself, we can find other categories).

Reading research has focused on some text types while ignoring others. For example, most previous research involves narratives but research with procedural text has been limited. In order to more thoroughly understand reading processes and assure the generality of results, different genres of text need to be studied in detail to determine what factors influence their reading. There is also a need to consider the way we classify the discourse; our classification needs to include both broad classifications and also narrow specification of surface types. It is important for the classification to allow for the difference between surface structures and semantic or deep structures (notional structures) since the two do not necessarily match up well. The notional structures of discourse relate more clearly to the overall purpose of the discourse, while surface structures have to do more with a discourse's formal characteristics.

As we can see from the above discussion, the research concerned with the study of discourse indicates that there are organizing principles in language that exists in extended speech and in writing beyond the single sentence in isolation. There are two common types of organization that have been recognized in the field of discourse analysis; one is the linear organization and the other is the hierarchical organizational pattern. The linear organization has a strong influence in monologue as well as in dialogue (Longacre, 1976). The hierarchical organization pattern exists mainly in narrative discourse but it has been documented that it also does exist in discourse types other than narrative (Meyer, 1975). According to

Meyer, the structure in a text is identified by a propositional analysis of text into a hierarchically arranged tree structure called the content structure.

Both Longacre’s work on discourse taxonomies and Meyer’s research on text structure emphasize that different discourse types have different organizing principles. First, let me introduce Longacre’s (1976) view on how discourse is organized. He recognizes four major types of discourse types “Narrative, or ‘story’; Procedural, or ‘how-to-do-it’; Expository, or ‘essay’; and Hortatory, or ‘sermon’ (p: 200). He summarized these types of discourse with reference to their grammatical characteristics in the following table :

- Projected	+ Projected
Narrative	Procedural
1- First/Third person	1- Nonspecific person
2- Agent oriented	2- Patient oriented
3- Accomplished time	3- Projected time
4- Chronological linkage	4- Chronological linkage
Expository	Hortatory
1- No necessary reference	1- Second person
2- Subject matter oriented	2- Addressee oriented
3- Time not focal	3- Mode, not time
4- Logical linkage	4- Logical linkage

In his explanation of the characteristics of these discourse types, Loncagre (1983) states: “In regard to the specific surface structure linkage of discourses, we find in narrative discourse very prominent use of head-head linkage (i.e., the first sentences of the paragraph cross-references to the first sentence of the following paragraph) and tail-head linkage (in which the last sentence of one paragraph cross-references to the first sentence of the following paragraph). Tail linkage may be varied to summary-head linkage, i.e.[having done all this, they then proceeded to ...]. Procedural discourse has very similar linkage of the head-head, tail-head and summary-head varieties. Expository discourse tends to have linkage through sentence topics and parallelism of content. Hortatory discourse depends heavily on linkage through conditional, cause, and purpose margins or their equivalents within a given language” (p. 9).

Discourse classification differs from culture to culture. We should be aware that the classification into broad categories of surface structure types subsumes many specific genres within various languages.

The narrative story category in European literature, for example, includes many other discourse genres (e.g. fairy tale, myth, short story, various varieties of novels) while in simpler cultures with oral literatures we may find only two or three (e. g. myth, first person accounts, formal stories). In the case of procedural discourse, we can say that in some nonliterate cultures it is almost nonexistent. As we know, procedural discourse ranges from the food recipe, to the how-to-do it book, to the instruction to a worker for his/her activities on a particular day. People learn how to accomplish these activities by just participating in them. Despite the tendency to consider the verbal components as part of the whole activity complex and that they do not ever attain the status of a continuous monologue, it is not too difficult for an outsider to elicit from people how to make something. The influence of the outsider, in this case, may cause the creation of a new discourse type.

Expository discourse covers a wide range of discourse genres; it can range from the familiar essay to the scientific article. Longacre (1976, 1983) claims that descriptive discourse, in which we simply are describing something which we see, may be different from expository discourse. As for the hortatory discourse, Longacre considers it to be a cultural universal. This discourse type ranges from sermons, to pep talks, to addresses of generals to the troops on the eve of an important battle. In any culture, we often find people giving oral advice to others or somebody urging on somebody else a change of conduct

It is quite often that within one discourse type we may find another genre that is embedded in it. This was clearly stated by Longacre (1976): " A discourse of a given surface structure type may embed with a discourse of the same or different type" (p. 209). Sometimes, we find a compound discourse containing two embedded discourses one of which could be expository and the other may be hortatory. To give another example, narrative may flow into drama (Longacre's fifth discourse type) or an embedded procedural discourse may be found in a narrative discourse. It follows that the surface structure narrative of any length and complexity inevitably involves a quantity of embedded surface structure exposition. The embedded expository discourse may be as small as an expository paragraph within a story or it could be a whole embedded expository discourse. Also, expository and hortatory discourse types relate quite well. We find that explanation of a subject can lead to a desire to urge a change of conduct on the part of those who hear what is being explained.

Earlier in this chapter, I discussed Beaugrande's definition of the term "text". Now, it is worth examining his views on text types. The linguistic typology advanced by Beaugrande (1980,1981) regards texts as communicative occurrences. Sentence typologies have been criticized because they focused on minimal units (i.e., phonemes, morphemes), and basic sentence patterns. In addition, they provide unsatisfactory results about the nature of the sentence. Text typology, on the other hand, is concerned with the study of language beyond the single sentence with special focus on text features and intertextual relations. We gained humble results from early research on text topologies. It was not enough to count up word classes or measure sentence length and complexity; rather research should have provided concrete distinction of the variety of texts we encounter everyday and the conventions of each text type. If some

researchers report that news reports have a lot of verbs and advertising texts have a lot of adjectives, this does not provide us with sufficient information about the nature and types of texts used.

The literature has provided us with two approaches to study the typology of texts (Schmidt, 1978:55). The first approach includes the traditionally accepted text types (i.e., narrative, literary, descriptive, etc.) and seeks to define distinctive traits of each one while in the second a theory of text is to be defined independently and then we have to wait to see whether there is a workable topology. Beaugrande (1980) used another approach which is considered a compromise; that is, in the development of a text theory, the applicability to text topology should be envisioned such that traditional types become definable.

Different cultures have different text types. Following Beaugrande, the categories of texts that exist in the Western culture include: descriptive, narrative, argumentative, literary, poetic, scientific, didactic and conversational texts. Beaugrande summarizes the features of each type as follows:¹

- In descriptive texts, the control centers in the textual world are in the main object and situation concepts whose environments are to be enriched with a multiple directionality of linkage. The link type of state, attribute, instance, and specification will be frequent. The surface text will reflect a corresponding density of modifier dependencies. The most commonly applied global knowledge pattern will be the frame.
- In narrative texts, the control centers in the textual world are in the main event and action concepts which will be arranged in an ordered directionality of linkage. The link types of cause, reason, enablement, purpose, and time proximity will be frequent. The surface text will reflect a corresponding density of subordinative dependencies. The most commonly applied global knowledge pattern will be the schema.
- In argumentative texts, the control centers in textual world will be entire propositions which will be assigned values of truthfulness and reasons for belief as facts; often there will be an opposition between propositions with conflicting value and truth assignment. The link types of value, significance, cognition, volition, and reason will be frequent. The surface text will contain a density of evaluative expressions. The most commonly applied global knowledge pattern will be the plan whose goal state is the inducement of shared beliefs.
- In literary texts, the textual world stands in a principled alternativity relationship to matchable patterns of knowledge about the accepted real world. The intention is to motivate, via contrasts and rearrangements, some new insights into the organization of the real world. From the standpoint of processing, the linkage within real-world events and situation is problematized, that is, made subject to potential failure, because the text-world events and situations may (though the need not) be organized with different linkages. The effects would be an increased motivation for linkage on the

¹ Beaugrande, R. (1980) Text, Discourse, and Process. Norwood, New Jersey: Ablex Publishing Corporation. 197-198

side of the text producer, and increases focus for linkage on the side of the receiver. This problematized focus sets even “realistic” literature (reaching extremes in “documentary” art) apart from a simple report of the situations or events involved : the producer intends to portray events and situations as exemplary elements in a framework of possible alternatives.

- In poetic texts, the alternativity principle of literary texts is extended to the interlevel mapping of options, e.g. sounds, syntax, concepts/relations, plans, and so on. In this fashion, both the organization of the real world and the organization of discourse about that world are problematized in the sense described above , and the resulting insights can be correspondingly richer. The increase of producer motivation and receiver focus will also be more intense, so that text elements will be assignable multiple functions.
- In scientific texts, the textual world is expected to provide an optimal match with the accepted real world unless there are explicit signals to the contrary (e.g., a disproven theory). Rather than alternative organization of the world, a more exact and detailed in sight into the established organization of the real world is intended. In effect, the linkage of events and situations are eventually de-problematized via statements of causal necessity and order.
- In didactic texts, the world must be presented via a process of gradual integration, because the text receiver is not assumed to already have the matchable knowledge spaces that a scientific text would require. Therefore, the linkage of established facts are problematized and eventually de-problematized.
- In conversational texts, there is an especially episodic and diverse range of sources for admissible knowledge. The priorities for expanding current knowledge of the participant are less pronounced than the text types depicted above (Literary, poetic, scientific, didactic texts). The surface organization assumes a characteristic mode because of the changes of speaking turn.

As in Longacre’s discourse approach, it is clear that these types cannot be strictly explicated along the same dimensions. Despite the fact that the concept and relation types for some text types are domain-specific, some categories such as narrative, argumentation and description may exist in various combinations in the other text types mentioned above. Another important point to make is that, since text types are dependent upon situational settings, people tend to use cues outside the text to assign texts of various formats to given types. The kind of cues and the way people use them are among the issues that we need to consider when discussing text types. As we can see, Beaugrande believes that for a linguistics of texts as communicative occurrences, we should not ignore the traditional text types even though we know that people may be able to utilize texts without identifying the type. The traditional text types have a function in language users’ heuristics. But if we do, he believes, the mode of the interaction of writer/reader will remain vague and definitely reading efficiency will be affected.

In his discussion of what he calls discourse force, Brewer (1980) has provided us with a classification scheme for the cognitive structures underlying different organizational forms. He was concerned with the prose of the traditional types of writing such as descriptive, exposition, and narrative each of which emphasizes a different intent on the part of the author. The author may write to inform, entertain, persuade, or present an aesthetic experience. Based on Brewer's system, the series of events in time found in the narrative discourse are depicted and related through a causal or thematic chain. So, in this case, the underlying cognitive structure consists of temporally occurring events having a causal or thematic coherence. In the case of descriptive discourse, vision is considered to be the predominantly involved sense. Thus, the cognitive structure is thought to be visual-spatial. The expository discourse type differs from the other two types in that it sets forth abstract logical processes. Therefore, we expect classification, comparison, and induction to be part of its cognitive structure.

The problem with the notion of discourse force is that it considers one point of view of the author who may have an intention different from that of the reader. As we know, some types of discourse can be designed to inform and entertain at the same time and if we focus on only one view, our comprehension will seriously be affected. On the other hand, this classification system may be useful to the reader. If the surface clues to the underlying structure are emphasized, the reader will be able to anticipate the author's purpose and accordingly adopt a reading strategy appropriate for the structure. For example, an author may use colloquial language to entertain while another author uses formal language to indicate that the purpose of his/her writing is to inform. The underlying cognitive structure for each of the above discourse types is presented in the following table (Brewer, 1980:p. 225):

Figure 2. 1
A Psychological Classification of Written Discourse Types

Discourse (underlying Structure)	Discourse Force			
	Inform	Entertain	Persuade	Literary- Aesthetic
Descriptive (Space)	Technical description Botany Geography	Ordinary description	House- tisement	Poetic description
Narrative (Time-Events)	Newspaper Story History Instructions Recipes Biography	Mystery novel Western novel Science fic- tion novel Fairy tale Short story Biography "Light" drama	"Message novel" Parable Fable Advertisement Drama	Literary novel Short story "Serious" drama
Exposition (Logic)	Scientific article Philosophy Abstract definition		Sermon Propaganda Editorial Advertisement Essay	

Source: Brewer, p. 225

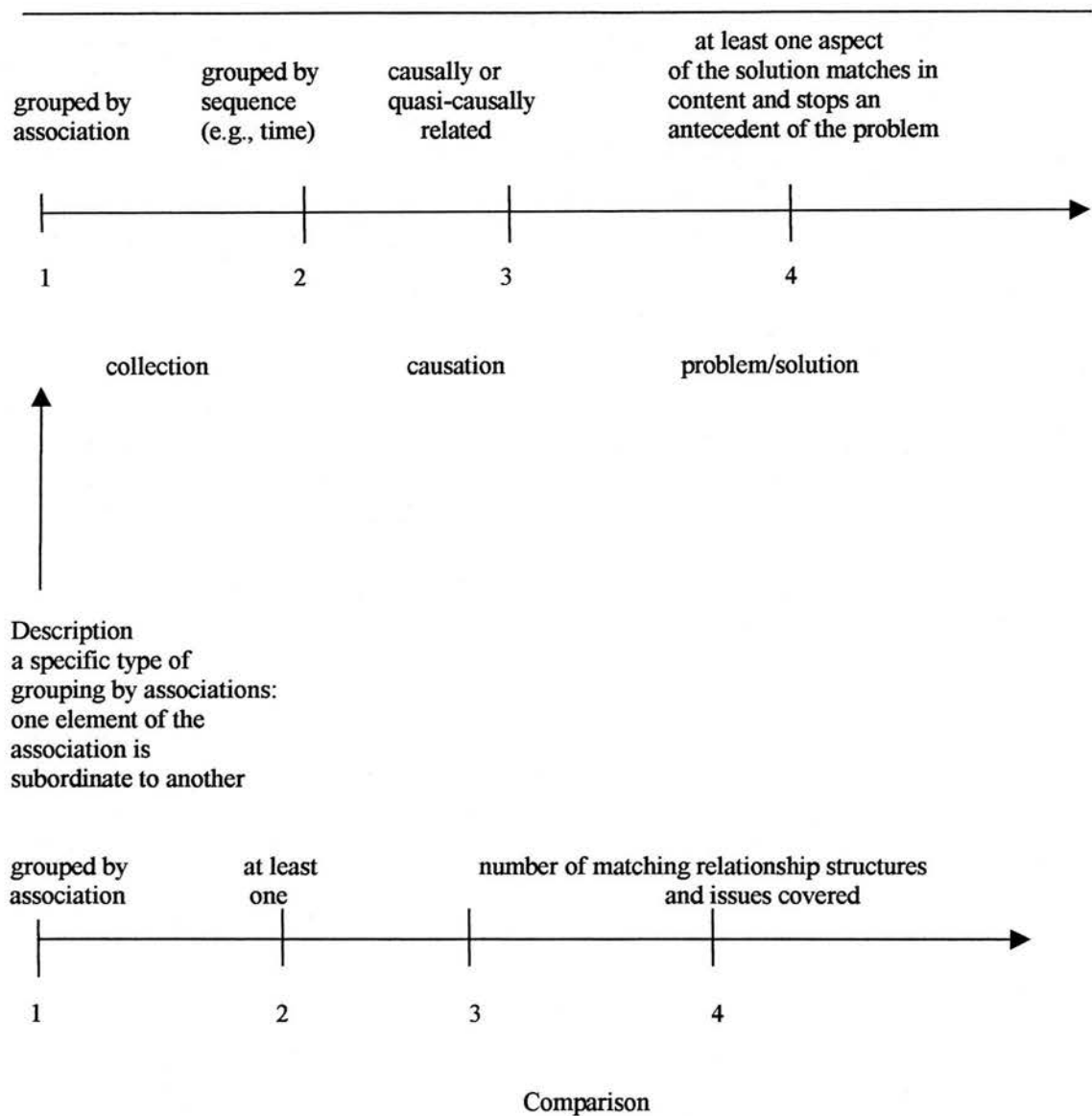
2.5 EXPOSITORY DISCOURSE

Meyer (1975; 1977a; 1977b; Meyer, Brandt, and Bruth, 1980; Meyer and Freedle, 1984) whose work has been influential in the field of text analysis investigated how L1 readers interact with different types of rhetorical organization of expository prose. The results obtained from her research indicate that certain types of expository organization interact with readers' background knowledge and processing strategies differently from other types. Meyer (1979) has gathered empirical evidence that there are five basic ways of organizing expository discourse: collection, description, causation, problem/solution, and comparison. Although she emphasizes these types are not intended to be exhaustive or definitive, her research has shown that there is a good support for the belief that there are significantly distinctive types of prose. The five discourse types have specific kinds of impact on reading comprehension of native speakers of English as well as EFL/ESL readers (Carrell, 1984, 1992).

Meyer and Freedle (1984) provide us with the characteristics of each of these types. The description of these features are presented in figure 1. They consider the collection type to be the loosest organizational type simply because it is merely a grouping or listing of concepts or ideas by association. If this association is by sequence (e.g., by time), the listing becomes more organized (e.g., yielding a historical chronology). The description schema is a specific type of grouping by association in which one element of the association is subordinate to another, namely to the topic. The description gives more information about a topic by presenting an attribute, specific, or setting. The structures of collection and description combine to form a sixth type (collection of descriptions) when a number or collection of attributes, specifications, or settings are given about a topic. In the causation schema ideas are grouped chronologically and are related causally. This type is like if-then statements in logic, or like cause-effect (antecedent-consequence) statements. The problem/solution type is considered the most organized pattern. It contains all the features of cause-effect with the additional feature of overlapping content between propositions in the problem and solution. At least one element of the solution can neutralize a causal antecedent of the problem. The comparison type was put on a different scale from causation and problem/solution. This discourse type is organized on the basis of opposing viewpoints (either alternative views giving equal weight to two sides, or adversative views clearly favoring one side). It is not organized on the basis of time or causality.

Figure 2. 2

Figure 1 (components of each discourse type)



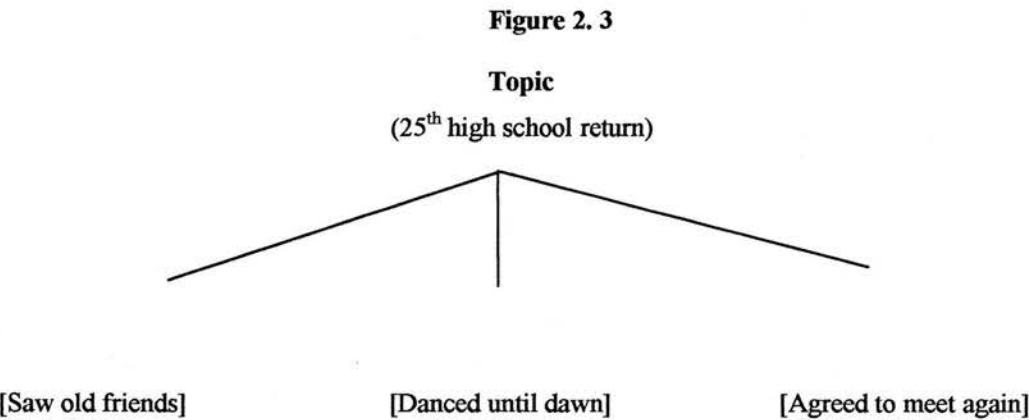
Source: Meyer and Freedle (1984, p. 123)

Meyer’s five expository types are common in various contexts. For instance, history texts often follow the time sequence type of collection while news articles are typically of the description type. The collection of descriptions type is commonly used in factual writing (Niles,1974). In scientific texts we recognize a problem/solution type in which a problem is raised then followed by the solution. The comparison type (particularly the adversative sub-type) is found in political essays. What we must remember here is that most prose consists of a combination of these rhetorical patterns.

In order to illustrate the preceding descriptions for four of Meyer’s major discourse types, Carrell (1984) provided us with the following brief mini-texts (P. 444-445):

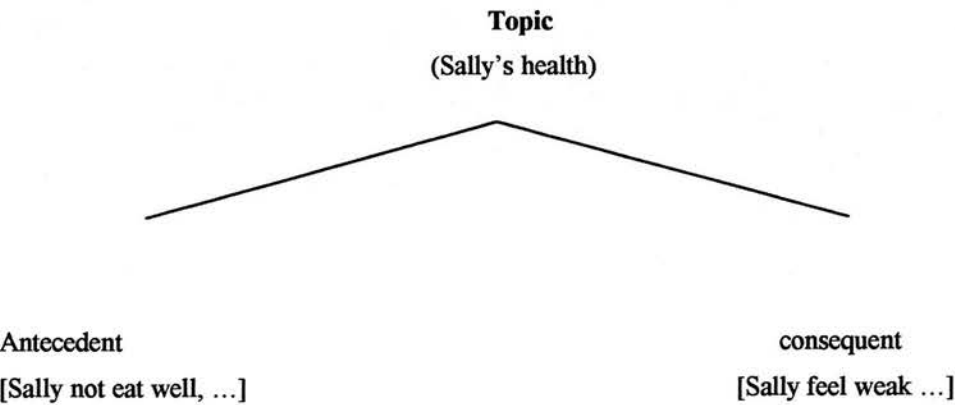
Collection of Descriptions

Our 25th high school reunion was held last year. We saw many old friends, danced until dawn, and agreed to meet again in five years.



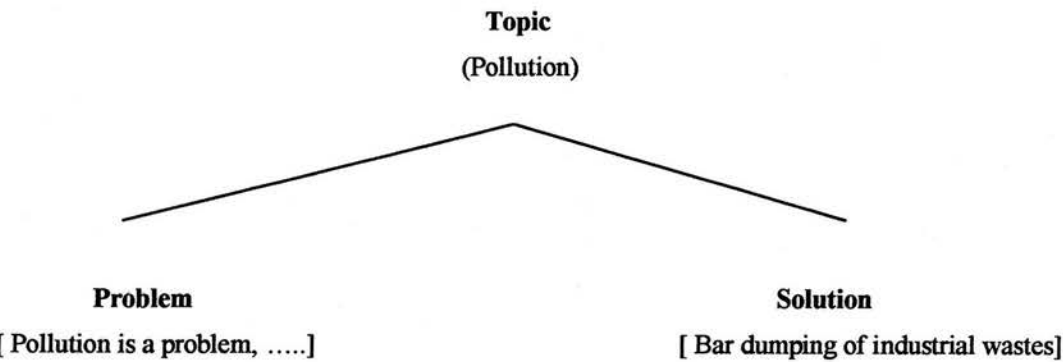
Causation

Sally wasn't eating well, exercising, or resting enough. As a result, she felt weak and run-down and never wanted to do anything.



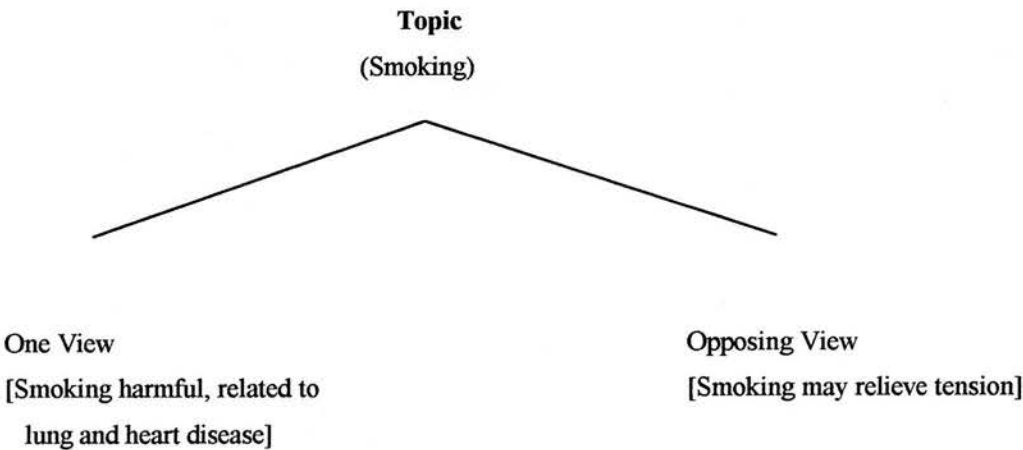
Problem/solution

Pollution is a problem; polluted rivers are health hazards and eyesores. One solution is to bar the dumping of industrial wastes.



Comparison

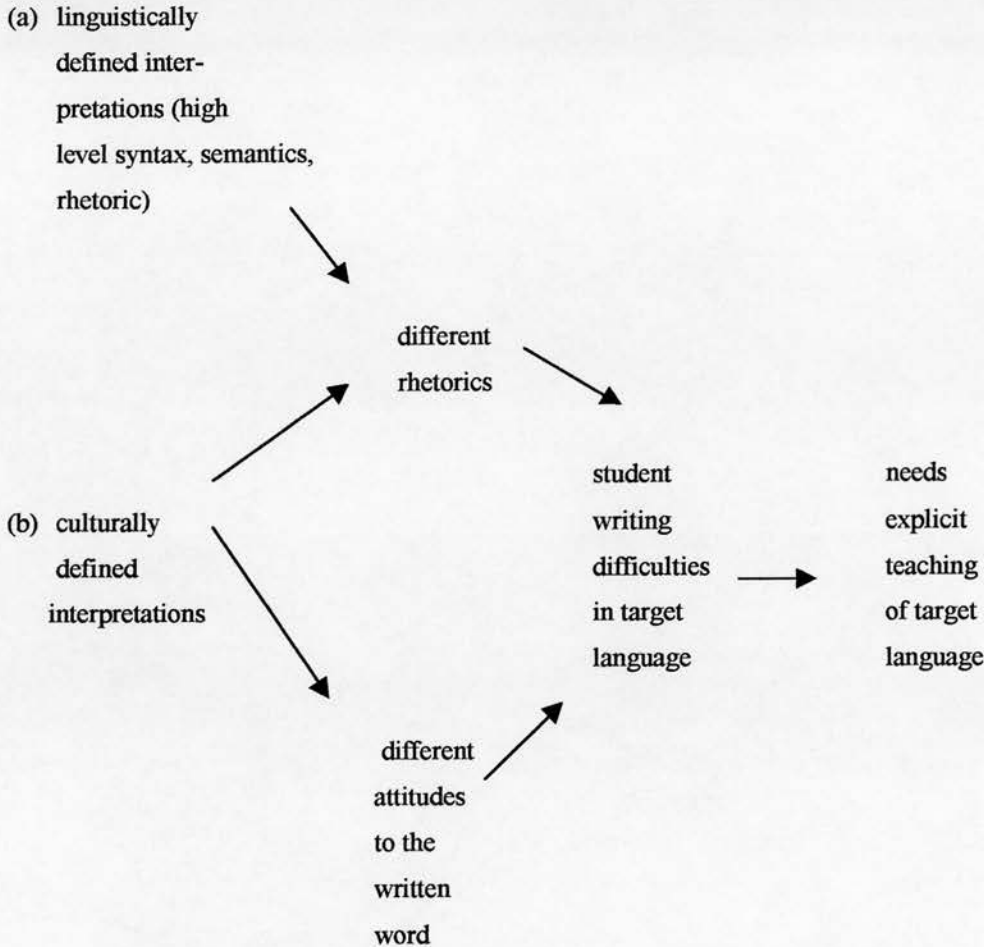
Despite evidence that smoking is harmful, many people claim this is not so. Although smoking has been related to lung and heart disease, for some people smoking may relieve tension.



Kaplan’s (1966, 1967, 1976, 1978a, 1978c) work in the field of contrastive rhetoric has been influential. He started his research by examining the different rhetorical patterns found in the writing of overseas students and the relation of these differences to patterns typically found in writing of the student’s first language. His theory is based on the hypothesis that the rhetoric of a language can be represented by a matrix containing psychological, grammatical and rhetorical modes. Based on this assumption, time, space and cause effect are universals of the psychological mode, while the components of grammar (subordination, coordination, superordination) and rhetoric (analysis/synthesis, comparison/contrast, definition/classification) are relative to different languages. According to Kaplan (1976), students from societies that have attitudes to the written word that are more appropriate to the spoken word may encounter an additional difficulty. The following diagram shows Kaplan’s thesis; it is based on his previous work (1976):

Figure 2. 4

**Differences in
Internal logic of
language:**



Although Kaplan's thesis is supported by the perceptions of many language teachers, the question whether culture rather than language is the determinant factor still remains. It is significant to examine how culture and linguistic interpretations operate. In order to further understand Kaplan's model of discourse analysis, we need to refer to its components. His model consists of the discourse bloc, the discourse unit and the discourse bloc signal. He borrowed the term "discourse bloc" from Willis Pitkin,

who used it to label the contextuated lump of language. Kaplan (1978c) summarizes these components in the following way:

“A discourse bloc is a linguistic unit larger than the sentence in which various smaller and more clearly sentential units (including, but not limited to, units marked as sentences) are connected by bloc signals into semantically and logically coherent structure. Discourse units are “free” and bound” syntactic structures interconnected by a variety of intersentential syntactic and semantic functions which join discourse units into a discourse bloc.... “ (p. 2).

Kaplan (1978c) also deals with topic, a language (discourse) universal found in this discourse bloc. He expands this by suggesting that the topic (a semantic phenomenon represented by a NP in the “head” assertion of a discourse) carries new information which is carried through by focus in the selection of syntactic alternatives.

Hinds (1979) claims that discourse of all types is organized in terms of paragraphs which are in turn composed of smaller units of uniform orientations larger than the sentences. He defines a paragraph as “ a unit of speech or writing that maintains a uniform orientation” (P.136). His definition is similar to Grimes’ suggestions of segmentation . According to Grimes (1975 :102), there are four ways for segmenting a text; namely uniform spatial orientation, uniform temporal orientation, uniform thematic orientation, and uniform participant orientation. Each of these segmentations corresponds roughly to a paragraph.

He also examined how paragraphs are organized internally. As for him, the internal organization defines relation among parts of the paragraph. He studied three sets of relationships that are associated with procedural discourse, expository, and spontaneous conversation. He adds that in all three types, paragraphs may consist of constituents termed segments. An indeterminate number of sentences or clauses, all of which maintain a unified orientation, is included in each segment. The unified orientation, is further constrained in that it forms a subcategory of the paragraph topic. Hinds’ definition of the internal organization of the paragraph is presented as follows: “Within the paragraph, there are a limited number of structures, termed segments, which are in a limited number of possible relationships to the paragraph topic-these relationships are termed steps, perspectives, highlights etc. depending on the discourse type” (P.150).

This view differs from that of van Dijk (1972) who believes that the elements of structure within the paragraph are classes of sentences. Also, Longacre (1976) used another term to refer to this same phenomenon presented above by Hinds (segmentation). He used the term *embedded paragraph* but unlike Hinds, Longacre used his term to refer to the embedding of one discourse genre in another.

It is of our interest here to examine the set of paragraph internal relationships that are associated with expository discourse since it is the type of discourse which is used in the current study. In a study by Hinds (1977b), expository discourse was investigated from the perspective of hierarchical organization. Segments in expository discourse specify the purpose of a given unified section of the paragraph. There

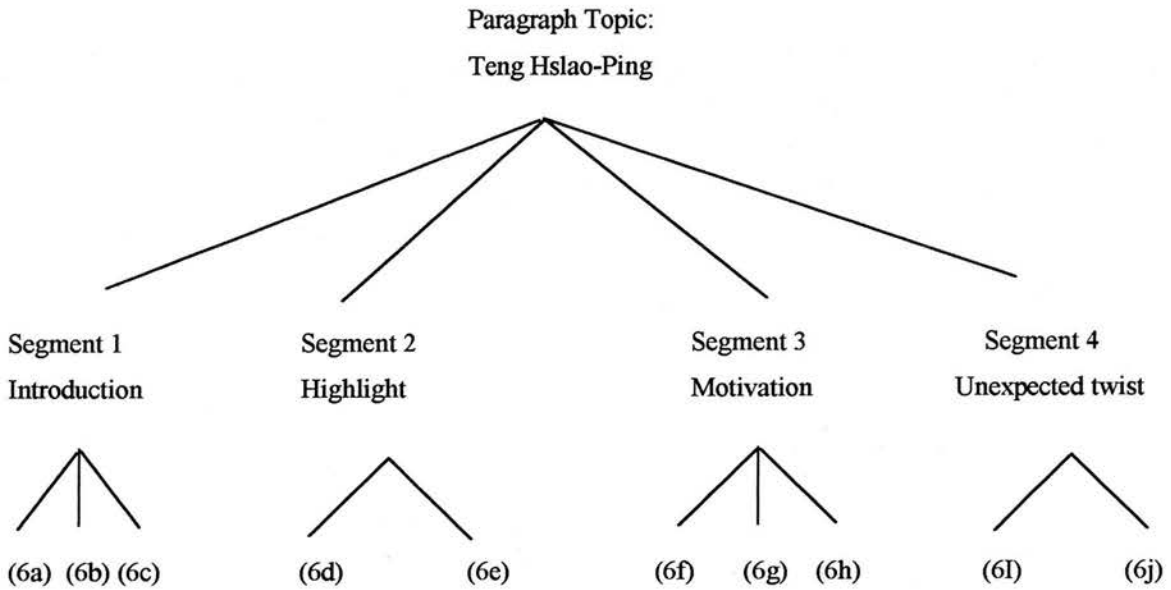
are four types of segments in an expository paragraph: introductory, motivation, highlight, or unexpected twist. Each segment will contain one sentence of particular semantic importance, termed the peak. Non peak sentences which are semantically subordinate to the peak may either precede or follow peak sentences. In order to illustrate each type of segment mentioned above, an article from *Time Magazine* is analyzed (Hinds 1977b)

Out Of The Shadows

- a. Pale and unsmiling, the diminutive Mao-suited official walked into the grand banquet hall of Peking's great Hall of the People one day last week.
- b. He paused uncertainly at the door, but protocol officials hustled him over to stand in line with Premier Chou En-Lai and greet guests at a dinner honoring Cambodia's exiled Prince Norodom Sihanouk.
- c. In this low-key style, Vice Premier Teng Hsiao-ping, now 69, returned from shadows that have enveloped him since 1966, when he was purged along with Chief of State Liu Shao-chias "one of a handful of party leaders who took the capitalist road."
- d. Teng had once ranked fourth in the party hierarchy (behind Mao, Liu, and Chou, and just ahead of the now-dead Defense minister Lin Pio). He was party general Secretary and a member of the politburo.
- e. Accused in the early months of the Great Proletarian Cultural revolution, Teng confessed immediately, admitting that "my thought and attitude were incompatible with Mao's thought."
- g. He now seems to rank about 20th in the hierarchy, though he has not regained his party posts.
- h. His return to at least a degree of prominence is another indication of Mao's continuing effort to reunite the leadership.
- i. But Teng's duties are modest.
- j. He is believed to have put to work reorganizing the youth corps.

Figure 2. 5

The analysis of this text is presented in the following diagram (Hinds 1979:143):

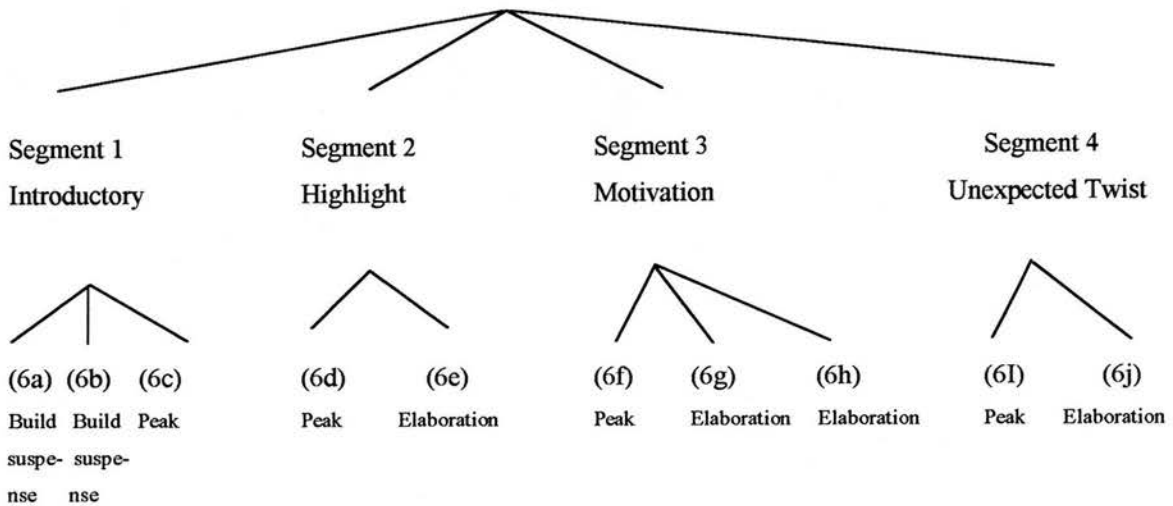


Following Hind's analysis, the first segment introduces the article by indicating Teng's return in the communist hierarchy. The second segment provides us with some relevant information about Teng's life. The third segment presents the motivation for the problem Teng faces. The last segment represents an unexpected twist of the events in the article. It informs the reader that Teng is not in the position of power that he should be despite his return to the leadership hierarchy.

This analysis is significant because it throws light on the semantic process within an expository paragraph and also focuses on the semantic subordination of nonpeak sentences to peak sentences, not the linear ordering of these sentences. Hinds (1979) explains that one of the important structural features of the segment in the monologue discourse is that it contains one functionally determined and often syntactically marked sentence termed the peak. Other sentences within a segment are semantically subordinate to the peak. These nonpeak sentences may either precede or follow the peak sentences.

Figure 2. 6

Paragraph Topic:
Teng Hslao-ping



In this analysis both pronouns and noun phrases are used to refer to Teng Hsiao-ping. Hinds (1979) adds "Rather than an arbitrary alternation of noun phrases and pronouns in texts of this sort, the choice of noun phrases over pronoun is strictly governed by the structure of the text" (P.154). Full noun phrases are used in peak sentences while pronouns occur in nonpeak sentences to refer to the topic of the paragraph. This phenomenon is found in other languages such as Japanese. It has been reported (Hinds and Shibatani 1977, Kuroda 1965, cited in Hinds, 1979) that full noun phrases occur in peak sentences in Japanese expository texts while ellipsis, the functional equivalent of English pronouns, occur in nonpeak sentences.

2.6 Summary

In this chapter, the notion of text, context and their relationship were discussed. I also dealt with text types suggested by Meyer (1975), Beaugrande (1980, 1981), Longacre (1976), and Brewer (1980). It has been pointed out that different discourse types have different effect on comprehension and recall. In addition, the internal organization of the paragraph was tackled focusing on Hinds' (1979) work on this issue. It has been suggested that a passage should be broken into paragraphs in order to provide readers with regular visual and thought breaks. A good paragraph starts with a topic sentence, and its sentences are arranged in a logical sequence, in support of the topic sentence. Sentences within a paragraph cohere when key words are repeated, and anaphora and conjunctions are used. A good paragraph is easy to read, and its gist is easy to extract and remember.

CHAPTER 3

MODELS OF READING COMPREHENSION

3.1 INTRODUCTION

Although we know that reading comprehension is an active process, we still don't know much about how reading comprehension works. In recent years, the study of text processing has attracted many researchers who have attempted to explain the various processes involved in comprehending written discourse. Several positions have been held on the nature of the reading process. One position indicates that reading is essentially text-based (a bottom-up process). This means that the text is the starting point of the reading act. Reading is also viewed as knowledge-based (a top-down process); it is in the mind of the reader. This view is based on Bartlett's (1932) notion that we have cognitive schema operating during the reading process. Another position is concerned with the processes involved in recalling and summarizing texts. This research demonstrate that some parts of text materials are more important to readers and more easily recalled than others. In addition, it claims that a central component of successful reading comprehension is the generation of inferences based on the information that is provided by the text. Other research focuses on the interactive process between reader and text. This view suggests that reading is both text-based (bottom up) and knowledge-based (top down)

This chapter is devoted to review models of the theories of several views on reading. As reading is the focus of these models, an account of the concepts of reading comprehension is first given. Then, a review of some reading comprehension models, as relevant to this study, is presented. Finally, the chapter is rounded off with a discussion of the pedagogical implications of these models and its importance in the field of teaching reading comprehension to EFL learners.

3.2 CONCEPTS OF READING COMPREHENSION

It is not surprising that many scholars think of reading comprehension as similar to other kinds of human behavior. Reading comprehension involves language, perception, motivation, concept development, the whole experience itself. As for many of them, it seems to be subject to the same constraints as thinking, reasoning, and problem solving. The classic works of Huey (1908) and Thorndike (1917) express this view. Huey believed that if we could understand reading we would understand the mysteries of the human mind and Thorndike defined reading as reasoning. Indeed, reading is a complex cognitive process.

Reading comprehension lacks a consistent definition among educators, reading specialists, linguists and psychologists. As a result, we find that reading has been defined in a variety of ways and that each definition tends to emphasize different aspects of the reading process. In general, all definitions of reading fall into two categories. One type of research views reading primarily as a decoding skill (it is basically a

perceptual process) and the other emphasizes reading for meaning (it is a meaning-centered process). Although there are differences of opinions about a precise definition of reading, most educators agree that there are significant processes that learners go through while reading. These processes include letter and word recognition, comprehension of concepts conveyed by the printed words and reaction to and assimilation of the new knowledge from the printed page with the reader's past experience. It is worth mentioning that in order to extract the meaning from the text, the reader engages in numerous lower-level processes such as identifying letters, recognizing words, and holding information in memory while deriving the structure of sentences. These lower-level processes are obviously important because, unless they take place, the higher-level comprehension processes will not be able to occur either.

The psycholinguistic model of reading developed by Goodman (1965, 1967, 1979, 1982) and Smith (1971, 1982) has been influential in the field of reading comprehension. Their research has shifted the emphasis in teaching vocabulary from learning words in isolation to learning words in context. The use of context as a means of aiding vocabulary learning was given strong support by their reading model. Smith (1971) claims that the best way to identify an unfamiliar word in a text is to draw inferences from the rest of the text and not simply to look it up in a dictionary. Recognition and understanding of a given word can be affected by the words which have preceded it. This view has focused both teachers' and learners' attention on the importance of context dependence in the interpretation and use of words which in turn affects the learners' reading comprehension skill.

Goodman (1965, 1967) suggests that reading is a selective process; it is not primarily a process of picking up information from the page in letter-by-letter, word-by-word manner. What good readers do is that they use knowledge they bring to the reading and then read by predicting information, sampling the text, and confirming the prediction. This view is also expressed by Smith who believes that reading is an imprecise, hypothesis-driven process in which the reader contributes more than the visual symbols on the page. According to Smith, sampling is effective because of the extensive redundancy built into natural language as well as the abilities of readers to make the necessary inferences from their background knowledge.

In brief, what Goodman (1967) and Smith (1982) were trying to say is that the reader first makes a prediction about the meaning of the text which is based on the reader's knowledge of the world and on what he or she already read of the text. Next, the reader converts this predicted meaning into graphic form and then he or she samples the actual text to see if the text matches this predicted form. In this process, the reader uses his/her knowledge of grammar and knowledge of the conventions of written language. The reader assumes that the guess is correct if the subsequent text makes sense but if it does not the reader then regresses and makes another prediction. The development of the reader's prediction skill will be further discussed in the pedagogical section of this study (chapter 8).

Many researchers stress the interactive nature of the reading process. Rumelhart's (1977) definition of reading reflects this interactive nature. He states that "reading is the process of understanding

written language. It begins with a flutter of patterns on the retina and ends (when successful) with a definite idea about the author's intended message. Thus, reading is at once a 'perceptual' and a 'cognitive' process. It is a process which bridges and blurs these two traditional distinctions" (P. 1). Since reading is a problem-solving process, the reader tries to discover what the author means while, at the same time, they build meaning for themselves. Of course they use their own language, their thoughts, and their view of the world to interpret what the author has written. The interpretation is always limited by what readers know. Obviously, there are differences between the language, thoughts, and meanings of an author and those of the reader. When producing a text, the author's creation is also limited by what he/she knows. When the reader's own language and thought become involved through interaction with the language and thought of the author, readers can never be sure whether they have discovered the meaning the author intended. But since they are compelled to understand what they are reading, they try hard to interpret actively in order to gain meaning, which is their ultimate goal. So, readers are as active in searching for meaning as is the writer in creating written language.

According to Bernhardt (1991b), neither text-driven nor reader-driven processes have been proven to be a single predictor of reading comprehension and it is more likely that the different processes work together, influence, and support each other during reading. Bernhardt (1991b) explains this interaction by saying: "The second language reader (as any reader) has perceptual systems working for him in addition to phonological, lexical or word meaning, and syntactic processes that provide text input. At the same time, the second language reader (as any reader) has a knowledge base that fills in the gaps in text" (p. 120). Following this view, we can say that reading involves the continuous integration of the available information, from inside and outside the text, in order to construct a coherent representation of the text. This suggests that the factors which affect comprehension fall into two categories: factors inside the head and factors outside the head. The inside factors may include linguistic competence, interest, motivation and accumulated reading ability. The elements on the page (i.e., text readability, text organization) and the qualities of the reading environment are outside factors which influence reading comprehension. What is meant by the qualities of reading environment is those tasks which teacher and students pursue before, during, and after reading as well as the general atmosphere in which these tasks are to be completed. We sometimes study these factors separately but the fact remains; that is, all of these factors interact with one another.

Another definition of reading as an interactive process is that of C. Smith (1978) who states that: "Reading then can be defined as an interaction, a communication in which the author and the reader each brings his background language, and a common desire to reach the other person. No matter how else one defines reading, it must involve ideas, backgrounds, common language, common interest, and a mutual point of departure" (p. 28). Again this definition stresses that reading comprehension is a process in which meaning is constructed actively. We construct meaning among the parts of the text and between the text and one's personal experience. It also involves the purpose of reading and the learner's attitude towards

the materials being read. In other words, reading should not be regarded as a reaction to a text but rather as an interaction between the writer and the reader mediated through the text (Widdowson, 1979). It is an act of participation in a discourse between interlocutors and therefore reading efficiency should be measured on the basis of how effective a discourse the reader can create from the text. The creation of this effective discourse possibly occurs either from the reader's rapport with the writer or from his/her purpose in engaging in discourse in the first place.

From the above review, we can conclude that research which is concerned with comprehension processes regards reading as a complex of mental processes that a reader uses when interacting meaningfully with printed discourse. The complexity lies in the difficulty of knowing the exact nature of the interaction between reader and text. As has been explained, although the various processes can only be studied in isolation, they interact with each other. When these processes interact, we can then claim that reading occurs. The nature of the interaction process can not be determined until methods of studying the full interaction of text and reader variables can be established. This limitation should be taken into consideration so that reading instruction can incorporate all aspects of the reading process. Reading is also a mental activity which means it can not be directly observed. We only see the products of the reading act such as word recognition, responding to questions, recognizing the text structure, using new ideas and so on. Researchers can only identify the processes used during reading by inference which may be affected by their previous knowledge and perspectives. As a result, there is a possibility that they might be biased toward their own point of view. However, the more research we have, the more our understanding of the nature of the interaction process grows.

These definitions also suggest that reading is more than acquiring information from print; the reader interacts with discourse and obviously contributes much to the reading act. The interaction means that the reader's knowledge, purpose, perspective, skill level, and processing style are brought to the text. If these match with the author's ideas, comprehension is more likely to occur. So, it is the author's task to make the interacting meaningful by addressing the appropriate audience and it is the reader's task to make the interaction meaningful by purposefully employing knowledge and skills (Meyer, 1975, 1977). Successful reading is then dependent on the author's and the reader's abilities to communicate effectively. Another important assumption that is embedded in these definitions is that reading is a meaningful process in which the knowledge of the reader undergoes a change to include new information, to rearrange old information, or to identify old information with new sources in order for comprehension to occur. The change of the reader's schemata has been examined in a variety of ways. Some researchers examine students' recall, others focus their research on recognition, a third group study the effect of reading time and so forth. These different means of measurements obviously lead to different conclusions. Although the schema theoretic approach has helped us understand the role of background knowledge in comprehension, still more work is needed to explain the change of schemata and the effect of such change on reading. (See chapter four for further discussion of the schema theoretic approach and its effect on reading

comprehension). The point to make is that the way reading is defined affects the way it is studied and the interpretation of the results gained.

3.3 MODELS OF READING COMPREHENSION

There are several variables which affect prose comprehension. These variables include the content of the information in a text, the structure of this content, emphasis, inference, learner's world knowledge, the perspective of the learner, the learner's purpose for reading, the skill level of the learner and the processing style of the individual learner. A number of prose analysis techniques were developed to identify the structure of content. The best-known and most widely used text analysis systems were developed by Kintsch, (1974), Kintsch & van Dijk, (1978), and Meyer (1975). There are other important text analysis systems such as those developed by Frederiksen (1975, 1979) and Beaugrande & Dressler, (1979). The learner's world knowledge variable was investigated by many researchers. Anderson (1977) and Carrell (1984) have shown that the learner's schemata plays a significant role in interacting effectively with the text. Also, the perspective of the learner is claimed to affect recall (Anderson & Pichert, 1978). The skill level of the learner including his/her educational and developmental levels influence the way he/she comprehends texts (Meyer, Brandt, & Bluth, 1980).

Content, structure, emphasis, and inference are variables in which readers and authors are involved. Generally speaking, authors have an idea of what their readers know and the message they want to convey to these readers. So, when writing, they have to consider these issues. They have to think of the way the content is to be organized, the emphasis they place on certain content and relationships, and the inferences they assume their readers can easily make. On their part, readers come to the text with varying experiences that may affect the communication intended by the writer. We have to consider their background knowledge, purpose for reading, perspectives, skills, and processing styles. The interaction between the author and the reader depends mainly on their cooperation. In order for the interaction to be productive, the author must write with sensitivity to the attributes of the reader and the readers should seek to apprehend the intention of the author as they relate the message to their own knowledge system for their own purposes (see chapter 4 for further discussion).

In the remaining section of this chapter, I intend to discuss different approaches to reading comprehension which deal with some of the text variables discussed above. Meyer's (1975) text analysis system, van Dijk and Kintsche's (1983) strategic model, Fredriksen's (1975,1979) model, and Beaugrande (1980, 1984)) world text model will be presented.

3.3.1 VAN DIJK AND KINTSCH'S MODEL

The strategic model advanced by van Dijk and Kintsch (1983) aims at analyzing discourse processing from the word units on the lower level, up to the unit of overall themes or macrostructures. Their model is complexity oriented, that is, they attempt to understand words and clauses in which these words have various functions moving to complex sentences, sequence of sentences and finally the overall textual structures. In other words, they try to extend the notion of comprehension strategy to include the analysis of discourse processing across different levels of input, as well as both textual and contextual information, and both external and internal information.

There are certain features for the strategic processes, one of which is that they involve not only the textual characteristics but also the characteristics of the language user e.g. his/her goals or world knowledge. This means that in his/her attempt to understand a writer's message, a reader of a text will try to reconstruct the meaning of such text in a way that suits his or her own interests and goals. Also, strategies are part of our general knowledge which need to be learned and even overlearned before they can become automatized. Learners may need to develop new strategies when they encounter new types of discourse or forms of communications.

The strategic model also focuses on the strategies of knowledge use. How knowledge is activated, and how learners use knowledge strategies in dealing with texts depends mainly on the goals of the language user, the amount of available knowledge from both text and context, and the degree of coherence needed for comprehension. These components of strategic knowledge use are monitored by the control system which is a basic property of this model. This overall control system has different functions in which certain information such as the type of discourse, the type of situation, the goals of reader/writer, the semantic structures, and the macrostructures of the text, must be available in order for the control system to work when processing each discourse.

Van Dijk and Kintsch's model consists of a number of components: propositional strategies, local coherence strategies, macrostrategies, schematic strategies, production strategies, stylistic strategies, rhetorical strategies conversational strategies, and strategies that language users have to use to process nonverbal information (i.e., facial expressions, body position, gestures, etc.). I will give a brief summary of a few of these strategies as they are relevant to the current study.

Local coherence strategies are concerned with the meaningful connections between successive sentences in a discourse. The construction of local coherence is crucial to understanding, and therefore the strategic establishment of such coherence requires language users to search as effectively as possible for potential links among facts denoted by the discourse propositions. It has been suggested elsewhere (Van Dijk and Kintsch, 1978) that language users establish coherence after the complete processing of clauses or sentences but in fact the establishment of local coherence takes place at an earlier stage. Language users don't wait for the rest of the clause or sentence to be completed, they immediately start to draw links

among facts by coreference. In other words, it is not necessary for the interpretations of sentences to be completed before beginning to establish links among propositions. Semantic coherence, then, may also be global, i.e. the language user tries to make guesses about a particular topic using the minimum of textual information available in the first proposition. His or her guesses will be verified and confirmed by different types of information obtained from the title, thematic words, thematic first sentences, knowledge about expected global events or actions, and information from the context. Several notions have been employed to describe this global nature of coherence: topic, theme, gist, upshot, or point. Van Dijk (1977) has introduced the notion of macrostructure in order to provide such an abstract semantic description of the global content and hence of the global coherence of discourse.

Two types of macrostrategies are recognized in the strategic model: **textual** and **contextual**. Textual macrostructures include: syntactic strategies, semantic strategies, schematic strategies, topic change markers, and structural signals. Strategies for topic introduction and possible topics and discourse types are contextual macrostrategies. Taking a brief look at some of these strategies may help us to understand how language users approach texts.

The discourse usually provides signals to indicate the presence of macrostructures and hence facilitate inference. What language users actually do when handling a text is bring different sets of knowledge, opinions, beliefs, etc, for the purpose of inference and accordingly, different macrostructures may be formed. Therefore, language users try to control these personal variations and accordingly limit the possible global interpretations. This is done by employing different devices one of which is to use available text signals that best express the macropropositions, in other words, telling what the topics are. Following van Dijk and Kintsch(1983), these topical or thematic expressions may occur at various locations of the discourse, but preferably at the beginning or end of the text as a whole or at the beginning or end of the relevant episodes or paragraphs. These are considered **structural signals**. Syntactic signaling devices, on the other hand, work as a means of connecting and distributing information between sentences of discourse and are often used to indicate local importance. These signals can also assume a global role or function if they add up repeatedly pointing to a particular piece of information. Another strategy is the identification of **topic change markers**. When we talk about topical expressions, we discuss them in relation to the discourse as whole and to the so-called episodes. There are different ways of marking these episodes. For instance, episodes in spoken discourse are marked by a pause while paragraph indentation is the surface structure marker for written discourse. They can also be marked semantically since each episode will include specific information and will have signals of topic change which in turn help readers to realize the transition from one topic to the other.

So far we have talked about some semantic strategies for macrostructure inference. In their attempt to make powerful predictions about a given sequence, however, language users depend not only on relevant textual information but also on contextual information and world knowledge. They employ, in other words, **contextual macrostrategies**. For example, some discourse types have themes or topics that

are stereotypical in nature, and therefore can be easily predicted. Having been provided with a particular theme about some event, we may be able to guess what will happen. Of course our knowledge about the conditions and consequences in the world will help us to create some useful expectations about the flow and development of the discourse. The macrostrategy based on our knowledge of the world, plays an important role here since discourse is about worlds that we know of or worlds about which we have a large amount of knowledge, opinions and beliefs. Van Dijk and Kintsch believe that most discourse types have constraints on the set of possible topics, a set they call the **topic set** of a discourse type. In their opinion, the topic set depends on sociocultural norms, values, and interests and may be associated with various aspects which influence the discourse processing (i.e. a culture or subculture, a communicative context or situation, roles, functions or positions of social members, and sex, age, or personality of speakers). Although we can expect the kind of topics which can be raised in a particular situation, we still know very little about constraints and rules for choosing, introducing, maintaining, and changing a topic, for depth of details, length and so on. There is a need for further investigation of these areas in the fields of linguistics, anthropology, and sociology.

The contextual macrostrategies referred to above tell us that language users can establish at least topic sets for each communicative situation even without particular information from the discourse itself. Language users apply different categories to the situations and interactions they witness or are participating in. The culture, the social situation, the specific communicative event or speech act, the various social dimensions and the personal characteristics of the speaker will influence the establishment of such topic sets. Language users are active members of their environment and discourse is considered the functional part of the communicative, and more general social and cultural, goals of individuals. This is a very cursory summation of van Dijk and Kintsch's Model of text comprehension

3.3.2 MEYER'S MODEL

In the previous chapter, I presented text types suggested by Meyer (1975). The following section is devoted to a general discussion of the principles underlying her theory of text structure since the current study examines the effect of one of these text types namely, the collection of description type, on EFL reading comprehension. Meyer's (1975) content structure analysis is applicable to all types of expository prose including story materials. In her system, the idea unit is the minimal unit of analysis. This unit includes both actual content units named in the text and relational terms inferred from the text. According to Meyer (1981), the structure of a text can be analyzed at three levels: the micropropositional level, the macropropositional level and the top-level structure of the text. The micropropositional level deals with the way sentences cohere and are organized within a text while the macropropositional level is concerned with the study of the paragraph and the logic organization and argumentation. In the third, the focus is on the top-level structure of the text as a whole. Meyer explains this system by suggesting that the content

structure is a propositional structure with relationships (predicates) at the micropropositional level held primarily by verbs from the text. She also believes that these relationships are held at the macropropositional level, by previously described rhetorical relations and that the arguments are individual content units from the text or content units which are parts of other propositions. Based on Filmore's (1968) case relationships and Grimes' (1972) semantic grammar of propositions, Meyer indicates that the relations at the micropropositional level are identified by lexical predicates and their role relationships. In addition, her system provides a classification system for the mechanisms of conjunctions such as comparison, causation, and collection. Meyer (1977b) describes her technique for analyzing prose as follows: "It views a passage as being a complex proposition which can be decomposed into subpropositions bearing certain relations to one another. Propositions are composed of a predicate and its arguments. There are assumed to be two types of predicates, with that term being used in the logician's sense: lexical predicates and rhetorical predicates. Lexical predicates are centered in a lexical item, typically verbs and their adjuncts, and take arguments which are ideas from the content of the text. The lexical predicates are related to the arguments by case or role relations or other rhetorical propositions. The rhetorical predicates frequently appear at higher levels in the structure of a passage, representing intersentential relationships. The rhetorical predicates consist of a finite number of labels which classify and describe the relationships, particularly intersentential and interparagraph relations, found in prose" (P. 317).

So, Meyer analyzed text into lexical propositions which show the case roles of words within sentences, and rhetorical propositions which establish the relations among sentences and paragraphs. The rhetorical predicates mentioned above specify the relationships within these propositions and order them into a hierarchical relationship or what Mayer calls content structure. As I have discussed in chapter two, Meyer and her associates (Meyer, 1975; Meyer and Freedle, 1984) identify five top-level organizational patterns or rhetorical relationships: antecedent-consequence, problem-solution, adversative, description, and attribution. The collection structure represents the loosest organizational type while cause-effect and comparison-contrast is highly organized. Meyer's (1975, 1977) research suggests that ideas which are located at the top levels of a structural analysis of prose are recalled and retained better than ideas which are located at the lower levels. Recall is strongly affected by the type and structure of relationships among ideas in prose particularly when they occur at the top levels of the structure. The same relationships will have little effect on recall if they occur low in the structure. Another research finding is that different types of relationships at the top levels of the structure differentially affect memory Meyer and Freedle (1984). In another study by Meyer, Brandt, & Bluth, (1980), the researchers found that students who are able to identify and use these top-level structures in prose remember more from their reading than those who do not.

I have previously indicated that certain top-level structures, such as antecedent/consequence relations are superior in increasing the recall of idea units than other top-level structures, such as a list of

attributes. Results obtained from Meyer and Freedle's (1976) study provide evidence that top-level information is more memorable, that is cognitively salient. The reason the researchers provide is that the superordinate structure gets rehearsed with each new piece of information that the reader processes and attempts to integrate with the main ideas of the text. They add that peripherally related information gets stored in the proper place in the hierarchy but does not get rehearsed again as each new piece is taken in and this is why it is more quickly forgotten than the top-level information which gets rehearsed frequently.

This view is in agreement with David Ausubel's subsumption theory (1968, 1978) which suggests that new knowledge is acquired and retained through a process he calls assimilation. Learners incorporate new concepts and ideas primarily as they fit in with and are assimilated or grafted into their existing organization knowledge. The new ideas are related to and interact with existing ideas of the learner forming a new meaning. Ausubel claims that during the process both the new information and the previously existing concepts or propositions undergo change or assimilation. This assimilation occurs because the older ideas which are more inclusive or general tend to subsume or absorb the newer ideas which for a time remain distinct or "dissociable" from the older established concepts and propositions in cognitive structure. When ideas lose this kind of "dissociability", they undergo subsumption by the more inclusive ideas. They are erased from the learner's memory or what Ausubel refers to as "obliterative subsumption" (Ausubel, 1968). In other words, what Ausubel was trying to say is that peripheral information is subsumed by the more central information (information high in the content structure) over time. This means that the information which is low in the content structure loses its independent identity and becomes less available for recall.

The rhetorical relations referred to earlier (problem/solution, antecedent/consequent, adversative, description and attribution) are identified by various key words or signals used by authors. Meyer (1975a, 1977) emphasizes the role of signaling in text comprehension. Meyer's hierarchical system illustrates the underlying logical organization and the relations within and among propositions in prose. Meyer refers to logical connectives as "words of signaling" that constitute non-content aspects of prose. This is clearly stated by Meyer (1977b) "Signaling is a noncontent aspect of prose which gives emphasis to certain aspects of the semantic content or points out aspects of the structure of the content. Words of signaling are not included in analysis of the structure of the content. Words of signaling are not included in analysis of the structure and content of a passage since they do not add new content and relations, but simply accent information already contained in the content structure of the passage. Signaling in passages shows an author's perspective on relative importance of the content related in his passage" (P.313).

The presence and amount of signaling play an important role. Research has shown that poor comprehenders benefit from the clear and repeated signaling of the top-level structure (Meyer, Brandt, and Bluth, 1980). Signaling takes different forms, for example Meyer (1975, 1977b) identified four signaling devices within prose. First, she referred to those words that specify the structure of relations in the content structure of a passage such as an author stating "there are two approaches. One is ----- and the second is

.....” Second, she talked about the introductory material that is taken from content to be presented later in the passage. Third, there are summary statements or information and fourth the use of pointer words like, an important point is” Indeed, signaling can clarify both hierarchical and semantic relationships. When we come across words such as “thus”, “therefore,” “consequently,” and the like, we expect that the next statement to follow logically from whatever has already been presented. If we see connectors such as “nevertheless,” “still,” “all the same,” or the like, we expect a statement that reverses direction. Signaling is not limited to the use of words, it can actually indicate how whole blocks of content are related. This can be clearly seen when authors use illustrations, evidence, further details, summaries, conclusions, previews, and the like.

In Meyer’s study (1977b) college undergraduates read and recalled immediately after reading and one week later passages with signaling and corresponding passages with the signaling removed. She reported that signaling had an effect in their recall; but this effect was not statistically significant. Although the presence of signaling helped to increase their recall, it was not an effective variable for determining what information is recalled. However, Meyer reminds us that it would be wrong to suggest that signaling is not that important. It is effective when it aims at middle and low levels of the content. It increases average and poor comprehenders’ recall substantially. In addition, certain plans seem to influence recall more than others. She also argues that in order to reach a larger audience of average readers, a writer must include signaling at strategic points, to reveal the major hierarchy of superordination and subordination.

3.3.3 FREDERIKSEN’S MODEL

Another theory of comprehension was developed by Frederiksen (1975, 1977). This system is also believed to apply to various types of expository prose. It is a flexible system because it operates from both the top-down and bottom-up views. This means that the reader begins with the high level skills of comprehension and progresses to the low-level skills of decoding. So, the system is in agreement with Rumelhart’s (1977) interactive model. In Frederiksen’s model the minimal units of analysis are the concepts, which may be a single word or word group, depending on the specificity desired, and the relation. Unlike Meyer’s system, analysis does not produce a hierarchical structure, but rather “structure graphs” which have more of a quality of networks. This model is more suitable for researchers who are looking for a method for scoring inferences made by the readers. Frederiksen accounts for the higher-level comprehension skills by generating a taxonomy of text-based inference that describes classes of comprehension operations. These classes range from the most basic lexical operations to the complex inferential task of determining the truth or value of a text. Based on this system, it is possible to determine the relationship between the actual elements of a piece of discourse and its comprehensibility (Marshall and Glock, 1978-79).

Comparing Frederiksen's system with Meyer's structural analysis when dealing with relations at the micropropositional level, we find that they are almost identical. Frederiksen describes an elaborate set of relations which hold among concepts, including both semantic and conditional (causal). Perhaps the basic difference is that Frederiksen's model makes more distinctions within types of relationships. Although the system does not provide natural segmentation into hierarchical levels, we realize that some logical relations defined at the micropropositional level could be adapted for use at a macropropositional level. Thus, the Frederiksen model can be thought of as a model of text knowledge in the mind apart from the organization of the original text with its emphasis of some ideas and subordination of others.

Different types of information in recall protocols were defined by Frederiksen (1975). These types are: overgeneralizations, pseudodiscriminations, text-implied inferences, elaborations, and veridical recall. He believes that the first three types occur at the time of comprehension while the fourth (elaborations) occur during recall. Furthermore, from his research we can conclude that poor readers' comprehension is facilitated by the existence of explicit statements of logical relationships (Marshall and Glock, 1978-79).

Frederiksen's theory has also tackled the act of writing. It is assumed that the thought process used in writing begins where the reading process ends---that is, with "knowledge structure" or area of comprehension. The decision of any writer to put down his/her ideas on paper is based on the broad network of what is known about the topic. Once this is accessible, the writer selects the most important information and the most effective words to convey that information. Meyer's system is also effective for studying writing, a point that I will address in the pedagogical section in this chapter.

3.3.4 BEAUGRANDE'S TEXT WORLD

The work of Beaugrande (1980, 1981, 1984) was discussed briefly in the previous chapter, particularly his description of the text types. He believes that the activities involved in the production and comprehension of a text can be explored in terms of model-building. As for him, the participant in communication can be said to be building a text-world model. This textual world is basically the cognitive correlate in the mind of a text user for the configuration of concepts activated in regard to a text. The model produces an elaborate network of content with relations, both syntactic and conceptual, clearly marked. In his explanation of difference between cohesion and coherence, Beaugrande (1981, 1984) stresses that the textual world contains more than the surface text, and is not held together in the same way. He believes that within the whole text-world model, there is a commonsense world-knowledge which is not made explicit in the text itself but can be recognized through other processes. Spreading activation is one of these processes in which an activated concept spreads its status to whatever is closely related in memory storage. Another process is inferencing whose task is to build bridges among explicitly activated concepts. In addition, the world-knowledge is contributed by updating that changes what is true in the

textual world as knowledge is presented. According to Beaugrande (1981, 1984), these processes are supported by pre-organized patterns of world-knowledge in memory such as a frame or a schema. He argues that all these processes should make it clear that cohesion (which rests upon syntactic formatting) differs from coherence which involves other processes not explicitly presented in the physical text.

One of the important advantages of this system is that it applies the same type of relationships to the text as to prior knowledge of readers which react together and thus result in effective communication. To put it a different way, an ideal pattern of concepts and relations is obtained against which the patterns of readers' reports of the content can be matched. Through observation of recall protocols, one can conclude that the reader is more concerned with maintaining coherence than with reproducing faithfully what has been read. It seems that readers tend to lose whole regions of the network rather than isolated nodes and links. The system has been criticized because (1) it is limited to the analysis of prose no longer than a few paragraphs, (2) it provides a very detailed structural descriptions which does not seem to result in dimensions that could be readily used for classifying texts, (3) It does not capture the visual image that readers tend to form about a given scene, and (4) the dismissal of surface features of text may add another disadvantage, that is, the model does not tell us about the considerable influence of surface features on text processing. Although it is a complex system and has been criticized for the limitations mentioned above, it makes great contributions to reading research. The detailed description of the organizational principles involved in text structuring can surely be helpful to educators in determining the cognitive skills which readers will need (Meyer and Rice, 1984).

3.3.4 THE INTERACTIVE MODEL

The shortcomings of the text-driven or reader-driven model have led researchers to think of alternative approaches that can better help in understanding the nature of the reading process. Most of the current models of second language reading comprehension are integrative or interactive in nature (Carrell, Devine & Eskey, 1988; Grabe, 1991). These models compensate for the shortcomings of the previous reading research and explore the comprehension process from the two perspectives interacting together (the reader perspective and text perspective). These interactive models are useful in that they focus on the specification of conditions under which a student can and will learn. In other words, they examine factors both internal and external to the reader. Chapter four, which is devoted to the discussion of the schema theoretic approach to reading comprehension, will tackle some of these models since they are related.

3.4 PEDAGOGICAL IMPLICATIONS

The findings of the studies presented so far have important pedagogical implications. From the recall experiments conducted by Meyer (1975,1977) and Meyer, Brandt, and Bluth (1980), it seems that

using the writer's or the speaker's schema (that is the top level content structure of a passage) appears to be the most efficient learning strategy. The reader may provide a different schema, when the writer's schema does not match with his/her own beliefs or purpose in reading the text. It is worth noting at this point that the communication between the reader and writer may fail if the writer doesn't convey to the audience something they don't believe or know beforehand. But we assume that the audience does know something about the content. Generally speaking, the content of discourse is not completely new. What the writer normally does is to select a topic known in some way to the audience but he/she adds new details, specifications, perspectives, etc. Readers usually have some frame of reference for making sense of any particular new fact or statement provided by the author or writer (Widdowson, 1979)

Meyer calls for the use of organizational plans which she believes crucial to the teaching and learning process. Reading instruction should focus on the identification of plans to enable readers to learn and remember the material they study. Students at schools are exposed to a set of new experiences and are introduced to many new topics which may cause difficulty. Language teachers should also bear in mind that students are not knowledgeable yet about topics they read and therefore new and unfamiliar content must be thoroughly organized to be effectively learned. The points drawn from Meyer's research will be beneficial to composition teachers. Teachers can provide their students with sufficient training to use topical plans and assist them to practice the different plans on a variety of topics. Composition teachers are therefore required to pay special attention to plans in composition training since one plan type could be more or less effective than another for different communicative goals.

The fact that text structure affects comprehension influences the way teachers select material and the way they design and organize the reading curriculum. As I have pointed out above, Frederiksen's model is based on certain assumptions that should be taken into consideration when planning reading courses particularly at early stages. One is that a skilled reader's comprehension is based on the interaction between the high- and low-level skills in a top-down manner. The other assumption indicates that if a reader encounters difficulty in decoding or other low-level skills, he or she will revert to the bottom-up technique. In addition to these, Frederiksen believes that early reading instruction should aim at achieving two main goals: one is to teach children to process written material in the same manner as they process oral language and the other focuses on teaching decoding skills so that the reader is not bound by the bottom-up model.

The results obtained from the study conducted by Meyer, Brandt, and Bluth (1980) show a strong relationship between comprehension skills and use of top-level structure in text. I also show that the use of the text's top-level structure in organizing one's recall of text is highly correlated with the amount of information recalled. Since Meyer and her associates are interested in the amount and quality of recall, that is the ability to recognize main ideas and provide their supporting details, it is worth referring to Afflerbach's work on main idea construction. Afflerbach's (1990) findings provide some useful implications for reading comprehension instruction. Prior knowledge plays an important role in main idea

construction. Readers will encounter severe difficulty if they lack prior knowledge of the text topic. To overcome such difficulty, comprehension instructors should familiarize readers with the content of the text from which they must construct idea statements. In addition, reading comprehension teachers should train their students to use and monitor many texts using the cognitively demanding strategies needed to construct main ideas. This is done within the limitation of their working memory system. Readers should also be allowed enough time to perform tasks associated with main idea construction. Successful main idea construction does not only depend on the use of the appropriate strategies but also on whether sufficient time is provided. One more thing to add is that strategies and selecting main idea statements are not the same. Obviously, constructing a main idea statement is more difficult than selecting it. For this reason, reading comprehension course designers should be aware of the difficult nature of the construction process and accordingly design material that reflects its difficulties.

3.5 SUMMARY

In this chapter, I have attempted to explain the comprehension process by providing definitions that reflect the interactive nature of reading. In addition, I discussed some of the classical reading models which address the way readers approach texts and the effect of text structure on comprehension and memory. Reading is understood to be a highly complex process that goes far beyond the ability to identify words. It involves a dynamic interaction among the reader, the text, and the social context in which reading takes place. Research on reading comprehension has shown that a text serves as a kind of linguistic blueprint from which the reader must construct meaning. As discussed above, the process of constructing meaning is not identical for every reader or for every occasion of reading, because it is influenced by the reader's perspective and prior knowledge; a point that will be discussed in detail when I review schema theory in the next chapter.

CHAPTER 4

SCHEMA THEORY AND THE INTERACTIVE APPROACH

4.1 INTRODUCTION

The interactive approach to reading has received much attention in recent years. As has been explained in chapter three, in order to compensate for the shortcomings of both the text-driven and reader-driven models, research has been directed towards interactive and integrated models. As Grabe (1991) points out, the term interactive refers to two conceptions, one is the general interaction which occurs between the reader and the text and the other is the interaction of many skills potentially in simultaneous operation. In the first type of interaction (reader/text), the reader reconstructs the text information based in part on the knowledge drawn from the text and in part from prior knowledge available to the reader (Carrell 1984, Roller, 1990). In the second type the interaction of the cognitive skills is claimed to lead to fluent reading comprehension. Reading is a mixture of both components. According to Grabe (1991) reading involves "an array of lower-level rapid, automatic identification skills and an array of higher-level comprehension/ interpretation skills" (P. 383). Research on reading comprehension tends to stress one perspective over the other or ignore one of the two perspectives altogether. While second language reading research focuses on the interaction between the reader and the text, cognitive psychologists stress the interaction of reading skills.

It is the interest of the current study to focus on the interaction between the reader and the text. To understand the nature of this interaction process requires a review of schema theory which has been influential in second language reading instruction. In the following review, the investigator discusses how the cultural background knowledge of the learners affects comprehension, what influence the structure of text has on comprehension and recall, and the simultaneous effect of both components (culture background and text organization) on the readers' performance. The review starts with a preliminary description of the concepts of frame, plan, script, and schema, an overview of the influence of content and formal schemata suggested by Carrell (1984, 1987), and some pedagogical implications related to these topics.

4.2 THE INTERACTIVE APPROACH

It is well known in the field of reading comprehension that the term interactive is most closely associated with the work of David Rumelhart (1976, 1977). Rumelhart has devised a theory of reading comprehension that utilizes the principle of interactive stages. Reading is viewed as an interactive process in which readers vary their focus along a continuum, from primarily text-based processing to primarily reader-based processing. There are no fixed steps through which readers must progress to arrive at



comprehension. So, the processing of text is a flexible interaction of the different information sources available to the reader.

It seems as if there is a "message center" which is fed with information from various independent "knowledge sources." This center is provided with information which generates hypothesis and expectations about what is being read. It is believed that information contained in higher stages of processing can influence the analysis that occurs at lower level and vice versa. Thus, readers can rely on any level of the reading process as their primary clues to meaning (i.e. lexical level, syntactic environment, general context, semantic context or even surrounding letters).

Rumelhart's theory considers both the top-down and bottom-up processes. It is the constant input and evaluation of information from stage to stage that produce the interactive nature of this model. Although Rumelhart's model is based on the assumption that a reader will start with letter and word identification and advance through the other stages, it is a flexible system that allows the reader to begin at any point and work in any direction. For example, if a reader uses semantic knowledge to construct meaning from print, one can say that the top-down process is at work.

When talking about the interaction nature of the reading comprehension process, we should remind ourselves that several factors interact during the processing of print. Research has provided us with evidence that the reading process varies as a function of the interaction among many factors. These factors include the reader's prior knowledge, type of discourse, sociocultural background, motivation and interest, task demand, and contextual factors. Clearly, if we seek full understanding of the reading process, we need to understand the ways in which the various knowledge sources of the reader interact with one another and with the text and the context of the reading situation.

As we can see, one of the most important issues in text comprehension is that it is not enough just to analyze a text but rather to try to understand how a reader responds to the text. Many educators and literary scholars have been arguing for a long time that the reader-text interaction, and not just the text alone, is crucial in comprehension (see chapter one). The significance of the reading models provided by modern research on text comprehension describe explicitly and in detail the processes involved in the reader-text interaction. This means that aspects of the reader-text interaction can perhaps be described and measured as objectively and precisely as characteristics of the text itself. In recent years, there has been growing support to the commonplace observation that the structure of a reader's preexisting knowledge affects how a text is understood and remembered (Carrell, 1984, 1987; Mannes and Kintsch, 1987). The relations between prior knowledge and comprehension have generally been investigated under the overall framework of schema theory.

4.3 FRAME, SCRIPT AND SCHEMA

Current psycholinguistic research supports the claim that background knowledge of the learner, or the so called schemata, has a great effect in ESL/EFL reading comprehension . Other terms such as frames, scenarios, scripts, event chains, plans, and expectations have been used by different researchers to refer to the same concept or background knowledge. These concepts (frames, script, and schema) are knowledge structures which tie together information in memory. I will give a brief account of some of these concepts that I feel important in this discussion (i.e. frames, schema, plan, and script).

4.3.1 THE FRAME

The frame theory is concerned with the way readers organize knowledge. The notion of frame comes from artificial intelligence and cognitive psychology. It has been studied thoroughly by Marvin Minsky who describes a frame as a model for representing the organization of knowledge in the mind. Minsky (1975) views it as "a mechanism for representation knowledge about a very limited domain. A frame produces a description of the object or action in question, starting with an invariant structure common to all cases in its domain, and adding certain features according to a particular observation"(p.152). The object, in this case, is seen as the focus of the whole description of the event. The relevant elements are then provided. For example, a house frame would include the parts, substances, uses, etc. that all houses have. These general characteristics of the frame knowledge which are shared by many members of the society are derived from the stored knowledge they already obtain. So, frame knowledge show how things are related by belonging to the same concept. (see Beaugrande,1980, p.164)

Van Dijk (1975) defines a frame as "an organization principle relating a number of concepts which can be actualized in various cognitive tasks, such as language production and comprehension, perception, action, and problem solving" (P.159), (cited in Widdowson 1984). We have pointed out in the previous chapter that in order to be able to construct a macroproposition, we must call on our knowledge of the world. It follows that connection constraints in discourse are actually based on the requirement that the respective facts they denote are ,e.g. conditionally, related. The establishment of this connection is usually done on the basis of other facts, which must be interpolated into the propositional sequence on the basis of our knowledge of the world as it is cognitively organized in frames. So, a frame is believed to carry knowledge derived from the observed input (local knowledge) and prior stored knowledge (global knowledge). However, the use of knowledge in discourse comprehension is not as simple as we may think; it is much more complex than the simple instantiation of scripts or frames. As we have shown in the previous chapter, most discourses will presuppose general knowledge but they will also bring new information, including information that is not simply an instantiation of a frame or script. If we are asked to report what often happens in a restaurant, we will automatically think of events such as : choosing from

the menu, signaling to the waiter, ordering food, asking for the cheque, giving a tip, etc. But we don't usually think of nonstereotypical actions or events which are organized by other frames or scripts such as a fire or a quarrel in a restaurant. Van Dijk & Kintsch (1983) explain this point in the light of their situation model. Being given some input, certain concepts will be activated and then instantiated with the specific constant of the text. The information resulting from the instantiation will be added to specific episodic memories about the same or similar situations (the situation model). So, it is this activated information in the situation model that constructs the knowledge base for understanding the text. The example given by van Dijk and Kintsch illustrates this activation process. They say that if we wish to construct a situation model as the one mentioned above (fire in a restaurant), we have to activate different kinds of information which involves general knowledge about restaurants, general information about fires and our personal experiences with such or similar fires.

It is obvious that interpretation of utterances cannot be achieved only on the basis of understanding the preceding sentences of a given discourse, but must also involve relation to a set of concepts presented in a particular frame. Previous sentences will tell us the actual case in hand while the frame information provides the possible forms of that case (van Dijk 1977). This means that during the comprehension process the reader will make guesses (believed to be relevant) about the next discourse, then he/she will try to verify the input against his global knowledge (the frame). There is a possibility that the reader's expectations and guesses cannot match with the incoming information in the discourse and hence the frame will be wrong. In this case, the reader has to search for another frame that fits into the overall comprehension process of the discourse. This is clearly understood from Minsky's (1975: p.212) explanation of his frame theory: "When one encounters a situation (or makes a substantial change in one's view of the present problem), one selects from memory a substantial structure called a frame. This is a remembered framework to be adapted to fit reality by changing details as necessary.... A frame is a data-structure for representing a stereotyped situation.... We can think of a frame as a network of nodes and relations [collections of which] are linked together into frame systems" (p. 212) Based on the frame theory developed by Minsky, the reader starts to conduct a memory search for the appropriate frame to be used when he/she encounters information related to a previously entered frame node; that is old information. But if the information is new, the reader may use a bottom up processing, which means that he/she may use the new information in order to replace a terminal default value (Minsky believes that each frame node has a variable number of terminals which are concepts associated with the frame node in a stereotypical environment). The other alternative is that the reader may use that information to create a new frame. This procedure is referred to as bottom-up processing (Rumelhart, 1977; Carrell, 1984).

4.3.2 SCRIPT

The notion of script refers to situations in which one is told what to say or do when he/she plays a certain role (being given instructions). Schank (1975) sees script as “an elaborated causal chain which provides world knowledge about an often expressed situation” (P.246). Scriptal knowledge reflect human needs to get things done in everyday interaction. We use it to make sense of the incoming information and even try to infer parts of such information that is related to the script but not clearly mentioned. In other words scripts are static knowledge structures that capture our expectations about common, everyday activities such as eating in a restaurant, visiting the doctor’s clinic, or going on a fishing trip (Schank & Abelson, 1977). A script consists of elements which include roles and props to which information from a text can be bound. But the main element in each script is thought of as a set of entry conditions that enable a series of causally related scenes which cause a set of results.

According to Schank & Abelson (1977), in the restaurant script we will find different elements (a) roles such as customer, waiter, and cashier, (b) props such as food, menu, and check, (c) the entry conditions such as “customer is hungry” and “customer has food”, (d) scenes which provide details about the activities associated with entering a restaurant, ordering a meal, eating a meal, and leaving a restaurant, and (e) the results such as “customer is full”, and “customer has less money”. So, when we present a discourse that describes a typical evening in a restaurant, we expect the readers to associate information from the text with the appropriate elements of the restaurant script. It is true that the script itself provides a complete, prefabricated representation of all the states and events in the discourse along with the causal and enabling relations that bind them together.

4.3.3 SCHEMA

The term schema was first employed by Bartlett (1932) to refer to the mental organization of an individual’s experience. In his famous book Remembering (1932: p.201), he defined a schema as “an active organization of past reactions, or of past experiences.” The word active here is used to emphasize what he saw as the constructive character of remembering, which he contrasted with a passive retrieval of “fixed and lifeless” memories. His argument was based on the assumption that memory is neither a “passive patchwork” nor “individual events somehow strung together and stored within the organism” but instead is composed of “living momentary settings belonging to the organism.” These structures, which are interconnected and are tied to attitudes and interests, help explain the “determining tendencies” seen in perception, understanding, and recall. They are dynamic, “actively doing something all the time” (p.201). People use them but change them through their use.

Brown and Yule (1983) describe schemata as “organized background knowledge which leads us to expect or predict aspects in our interpretation of discourse” (p. 248). A schema is said to be much more

committed to an ordered sequence of actualization, than a frame. In a schema setting, knowledge can be viewed as “a progression in which elements occur during actualization” (Beaugrande, 1980, p.124). The schema notion has been studied by many researchers and will be discussed in detail in the remainder of this chapter since it is the theory upon which this current research is based.

Although the notions of frame, plan, script and schema overlap, they are believed to share much knowledge (Beaugrande, 1980). If we consider Beaugrande’s house frame mentioned earlier, we can say that it could be selectively activated to produce a “house-building” schema by following “part of” and “substance of “ links and then putting the results in an order dictated by knowledge of gravity and construction. The frame would be useful for a descriptive text about existing houses, and the schema helps in telling or understanding a story about houses being built. If people were then called upon to actually build a house themselves, they could convert the schema into a plan via further knowledge about how to buy or obtain materials, how to select a site and how to produce the co-operation of other people. A professional contractor doubtless has a complete, detailed, and routinely applied house-building-script that other people do not possess” (P. 164-165).

Although these terms are different, “they share some fundamental assumptions and yield some of the same insights into comprehension” (Carrell, 1983, p.81).

4.4 SCHEMA THEORY

The schema theory has attracted a large number of researchers from different backgrounds. It has been a useful notion for describing how prior knowledge is integrated in memory and used in higher-level comprehension processes (Anderson & Pearson, 1984). Schema theory’s practical implications along with its intuitive appeal have made it the focus for research on ESL/EFL reading which in turn contributed to the improvement of reading instruction. This can be clearly seen in development achieved in the use of pre-reading activities and comprehension strategy. Schema theorists believe that the comprehension process is an interaction between the listener or reader and the text. The text alone does not carry meaning. It is not enough to rely on one’s linguistic competence which is actually considered part of one’s total background knowledge.

4.4.1 SCHEMATA

In order to understand the role of background knowledge in comprehension, it is important to discuss what is meant by schema. One of the classic definitions of the term was provided by Rumelhart and Ortony (1977). They state that “Schemata are data structures for representing the generic concepts stored in memory. They exist for generalized concepts underlying objects, situations, events, sequences of events, actions, and sequences of actions. Schemata are not atomic. A schema contains, as part of its

specification, the network of interrelations that is believed to generally hold among the constituents of the concept in question. Schemata, in some sense, represent stereotypes of these concepts. Although it oversimplifies the matter somewhat, it may be useful to think of a schema as analogous to a play with the internal structure of the schema corresponding to the script of the play. A schema is related to a particular instance of the concept that it represents in much the same way that a play is related to a particular enactment of that play." (P. 101). So, it is possible to store different kinds of schemata such as scenes, events, settings, activities, etc. For example, people have stored schemata for going to restaurants of different types (e.g. Mexican restaurants, expensive restaurants, fast food places, etc.), going on vacations, visits to doctors' offices, attending school, buying houses and so on.

According to Rumelhart and Ortony (1977), schemata have important characteristics that should be considered when applying the schema theory in second language reading instruction. The researchers argue that schemata have variables and that they can embed one within the other. Also, schemata represent generic concepts which, taken all together, vary in their level of abstraction. In addition, schemata represent knowledge, rather than definitions. When these features combine, schemata become powerful for representing knowledge in memory. For example, a "break" schema may include many variables and concepts. In this schema, any number of people can break a window for a variety of reasons. A homeowner can break a window because he has forgotten the key to the front door while a burglar wants to gain a quick and stealthy entry into an unoccupied house. A youngster will probably break it to vandalize property that belongs to a cross neighbor. Possibly, these people will use different methods and require different tools to cause the window to break. Regardless of all these possibilities and circumstances, the relationship between the variables will be the same in any schema of the concept "break". Terry Beers (1987: p.370) comments on this by saying: "But no matter what instantiation of variables, the relationships between them will remain relatively constant within a schema representing the concept BREAK: For some particular reason, some entity will still break an object by performing a particular act with an appropriate instrument." It is worth noting that in order for the schema theory to explain effectively how human beings use background knowledge, schemata must also specify information about the types of variables that may be bound to them.

From Rumelhart and Ortony's definition, we can also understand that schemata represent knowledge at all levels of generalization. This representation may vary from perspectives on the nature of the world, to views of what is being read, to knowledge of patterns of written expression, to the meaning of a given term. As mentioned, schemata are imbedded within schemata. To illustrate this, let's think of a schema for attending school. In this schema, we will find that we can make generalizations about studying to learn and about socialization. Within this general schema, there is a number of specific schemata. These would include teachers, principles, classmates, assignments, examinations, grades. Furthermore, beneath this level, we probably find another set of schemata that represent other specific events and activities such as a favorite story or book, a popular school activity, a particular teacher, a close friend or classmate, a

school bus experience, etc. One of the advantages of schemata is that once any element in a network of schemata is specific, it can be understood as it relates to the entire situation. For example, if the word field is mentioned in a schema for farming, it will immediately be understood as a place where farmers plant/harvest crops and not confused with a soccer field or a field of study (i.e, economics, politics science).

4.4.2 PRIOR KNOWLEDGE AND READING COMPREHENSION

It is well documented that prior knowledge plays a significant role in reading comprehension (Anderson, 1984; Carrell, 1984, 1987; 1992; Meyer 1975, 1977, 1979; Rumelhart, 1977, 1980). Most of the definitions of reading and the descriptions of the comprehension process have indicated that prior knowledge is the pathway to understanding new ideas and information (see chapter three for further discussion). The role of background knowledge in reading comprehension can be traced to Immanuel Kant (1781) who claims that new information, new concepts, new ideas can have meaning only when they can be related to something the individual already knows. Smith (1975) expressed the same idea in his book "Comprehension and Learning"; he said "the only effective and meaningful way in which anyone can learn is by attempting to relate new experiences to what he knows (or believes) already" (p. 1). The reading comprehension models presented in chapter three show that reader and text must interact for communication and learning to take place. Also, what we remember from, and consequently infer from a passage, seems to be affected not only by linguistic clues and semantic content, but also by the knowledge that we bring to a passage.

Based on schema theory, Norman and Rumelhart (1975) recognize different processes that are involved in the reading process. These processes include assimilation and accommodation which are determined by the learner's existing knowledge. The researchers argue that the learner must have a category system containing information about the surrounding environment; that is what is referred to above as schemata. The reader either fits new information into his/her existing schemata (assimilation) or he/she tries to adjust or modify the existing schemata to accept new or discordant information (accommodation). Basically, assimilation occurs when we are able to categorize a new example as belonging to a preexisting schema. In assimilation our schemata are not substantially changed while in accommodation we have to alter our schema or schemata. When the new information does not fit, we can ignore it or we can modify our schemata to accommodate that new information. There is also the case when the learner ignores or rejects information that fails to fit his/her prevailing view of the world. The idea that an individual's comprehension of new information is directly related to the richness of existing knowledge has important pedagogical implications in educational settings in general and in the reading class in particular. As we have seen, a person with more background knowledge is able to comprehend better than a person with less knowledge. The amount of knowledge readers have about a text topic has

been found to correlate significantly with their comprehension. As teachers of reading, it is our duty to determine the students' current knowledge of a topic before we expect them to do the necessary tasks required for understanding it. It is wrong to assume that our students will cope easily with a topic without checking their existing knowledge about this particular topic. In chapter nine, I will provide some techniques and strategies that will help in appraising and activating students' existing knowledge.

One of the important issues that schema theory is concerned with is the influence of the cultural background knowledge on comprehension. Numerous research studies have demonstrated that the reader's comprehension of a specific text is related to his/her cultural background. As discussed, knowledge is stored in schematic structure, or schemata, which are organized representations of one's background experiences. According to schema theorists, these schemata provide an interpretive framework which a reader may utilize when reading since they are influenced by the culture in which one lives. In order to construct an interpretation of the meaning of a text, readers tend to use their background knowledge, the situational context, and cues provided by the author of that text. So, any topic that is culturally familiar to the readers will be easier to comprehend compared to culturally unfamiliar topics (Carrell, 1984, 1987). In this case, the reader is able to activate and utilize the relevant schemata to facilitate comprehension of the culturally familiar text. Carrell (1988b) argues that a lack of schema activation is no doubt one major source of processing difficulty with second language readers. This argument has been verified not only through culture-specific text comparisons but also in discipline-specific comparisons of readers with familiar and unfamiliar background knowledge. It is sometimes difficult for students to understand the reading material simply because they do not have sufficient prior knowledge. In an effective reading class, such students should be given at least minimal background knowledge from which to interpret the text. The effect of the cultural background on comprehension will be further dealt with under the section titled content schemata since it is the major component addressed by the current study.

4.4.3 BOTTOM-UP AND TOP-DOWN PROCESSES

According to schemata theory, the process of comprehension involves two modes of information processing called "bottom-up" and "top-down" processing. Carrell (1983) states that "bottom-up processing is evoked by the incoming data, the features of data enter the system through the best fitting, bottom-level schemata". Schemata are organized from most general at the top to most specific at the bottom. Therefore, more general schemata are activated as the bottom-level schemata develop into higher levels. The bottom-up processing mode is called "data driven" (p.557). On the other hand, top-down processing occurs as the system attempts to search the input for information that confirm the prediction made and fit into the higher order schemata which have already been chosen. Top-down processing is called "conceptually-driven". Modern reading pedagogy has been influenced by the two approaches to reading. Until recently, the problem which reading instructors encountered is whether bottom-up or top

down strategies are more important. Teachers who follow the first approach focus their teaching on decoding the text in a step-by-step manner starting with small textual elements such as words and phrases. Others who follow the top-down approach train their students to use macro-level clues to decode the text. The schema theory has proposed a compromise between local and global decoding. As a result, reading is no longer viewed as a process of decoding, but rather as integration of top-down processes that utilize background knowledge and schema, as well as bottom-up processes that are primarily text or data driven (Carrell, Devine, and Eskey, 1988).

Although the use of top-down models of reading in second language contexts has been recommended by many schema theorists, we should be aware that the overemphasis on these top-down processes may result in negligence of the lower-level processes in reading such as letter and word recognition and syntactic processes. Efficiency in bottom-up processes was once thought of as a positive indicator of proficiency in reading while less proficient readers were those who appear to be word-bound. The importance of the lower-level processes in second language contexts has been reconsidered by recent research. In his review of the development in second language reading research, Grabe (1991) summarizes this view by stating : “ Previous perspectives on this language problem argued, in keeping with the psycholinguistic model of reading, that students were not sampling rapidly enough and were afraid to make guesses, to take chances. More current views of this learner problem argue that students are word-bound precisely because they are not yet efficient in bottom-up processing. The problem is that students do not simply recognize the words rapidly and accurately but are consciously attending to the graphic form (and in many second language texts there are often far too many new forms for students to attend to efficiently). No amount of guessing, which many poorer students actually seem to be good at, will overcome this deficiency and lead to automatic word recognition” (p. 391).

Carrell's (1983) findings are very relevant to this discussion. She reported that subjects in her study failed to use background knowledge to recall the familiar passage. She suggested that they did so because they were linguistically bound. It appears that nonnative readers pay too much attention to the language and therefore they process at the word and sentence level (bottom-up processing) and do not attend to the top-level organizational features and background information (top-down processing). According to Carrell, there may be a threshold level of language proficiency that allows readers to engage in top-down processing. This view is supported in second language reading research. In a recent study by Roller and Matambo (1992), the influence of background knowledge on the comprehension of Zimbabwean bilingual readers was examined. This experiment was based on the findings of Carrell's study in (1983) and Lee's research (1986). They also used the same reading passages used in these two experiments which were adapted from Bransford and Johnson (1972): the Balloon Serenade passage and the Washing Clothes passage. The researchers reported that Carrell's results for familiarity were replicated suggesting that there may be other factors than familiarity that influenced subjects' recall.

The point I am trying to make is that all readers do not process text in the same way. The bottom-up processors usually over-rely on the text and as a result they fail to create a coherent understanding of it. In fact, they make reading far more laborious than necessary because they only focus on decoding and fail to activate the appropriate schemata. On the contrary, the top-down processors over-rely on their background knowledge. This may lead to successful reading since they possess the ability to read efficiently and develop a coherent understanding of what is being read. But there is a possibility that the schema activation may result in understanding that is not intended by the author. Thus, the schema theory should provide a balance between the two types of processes. Students should be trained to use strategies that help them monitor their comprehension. Poor readers are believed to misinterpret a text because they are either not aware when the text is incomprehensible or they do not know when they should check their comprehension.

Language instruction should include activities that encourage students to evaluate their understanding of texts and take correct action when failures in comprehension are detected. Norman and Rumelhart's (1975) notions of assimilation and accommodation are very relevant here; if the schema does not account for incoming information, it is either modified or rejected and the search for a more adequate schema begins.

In order to illustrate the effects of background knowledge and bottom-up and top-down processing discussed above, two mini-texts will be introduced. The first mini text is from David Rumelhart (1977, p. 265) and Rumelhart and Ortony, 1977, p. 113):

"Mary heard the ice cream man coming down the street. She remembered her birthday money and rushed into the house ..."

Most people will interpret this text by assuming that it is a hot day and Mary is a young girl who hears the bell ringing on the ice cream man's vehicle. In order to buy some ice cream, she rushes into her home to bring her birthday money. Obviously, the text does not provide the readers with the information given in their interpretation of the whole event. It is, in fact, the schemata which are activated by most people that helped them to decode the message. The situation will be different if the following part is added to the previous mini-text: *"... .. and locked the door"* (Fillmore 1980). The reader, in this case, will definitely revise his/her interpretation of the text and try to activate other schemata that fit into the schemata development made up till this moment. The reader may come up with the following interpretation: "Mary is scared that the ice cream man will steal her birthday money"

The second mini-text that illustrates the effect of background knowledge and top-down and bottom-up processing is originally from Collins and Quillian (1972): *The policeman held up his hand and stopped the car*". Many schemata could be drawn from this text but the most likely one involves a traffic policeman who is signaling to a driver of a car to stop. Again, many concepts that are necessary for the understanding of the whole scene are not mentioned in the previous text. Readers, then, imagine that "the car has a driver, who put on the brakes of the car, which, in turn, caused the car to stop" (Carrell 1983,

p.558). So, the successful understanding of the text is due to the activation of the prior schematic cultural knowledge of how traffic police deal with car drivers. Carrell (1983) says "the basic point is that much of the meaning understood from a text is really not actually in the text, per se, but in the reader, in the background or schematic knowledge of the reader" (p.559).

Fries (1945,1963), in his discussion of the relationship between cultural background knowledge and meaning, recognizes three levels of meaning: lexical, grammatical and social-cultural. He pointed out that comprehension of the total meaning of a sentence occurs only when the linguistic meaning of the sentence is fitted into "a social framework of organized information". A passage from Washington Irving was the example Fries used to show the importance of a social-cultural level. He observed the response to Rip Van Winkle's archaic use of the term "tory" after an absence of twenty years. He found that the readers had missed the meaning of the story because the meaning of term "tory" had changed from "good citizen" to "enemy of the new government". The notion advocated by Fries is that understanding of the background information is necessary if one seeks a complete comprehension of a text. He also argues that "one must find some substitute for the kind of background knowledge he has in his own language" (p.100).

4.5 CARRELL'S APPROACH: CONTENT AND FORMAL SCHEMATA

Studies on cross-cultural schemata and discourse provide evidence of the influence of cultural background knowledge on reading comprehension and also prove that new ideas and new information can only be meaningful if one can relate them to past experience (Bartlett,1932; Carrell, 1984,1987, Carrell and Eisterhold,1983, Johnson 1981, and Rumelhart, 1980). Carrell (1987) categorizes schemata into two types: content schemata and formal schemata. The former refers to the background knowledge of the material, or content, of a given text, while the latter refers to the background knowledge of the rhetorical organization of the format, of different types of texts. Different components of content schemata are recognized in the field of reading comprehension. Studies concerned with content schemata demonstrate that the effect that cultural, ethnic, religious, geographical, and specialized background differences have on ESL/EFL reading comprehension is of great importance and can significantly affect the reader's performance.

Widdowson (1983, 1990) holds a similar opinion. In his discussion of negotiation of meaning, he views discourse as a communicative process which is achieved by means of interaction. For him a language user makes use of two different kinds of knowledge: systemic knowledge and schematic knowledge. What he means by systemic knowledge is the type of knowledge the reader has about the language at the phonological syntactic, lexical and semantic level. The schematic knowledge refers to the knowledge which is acquired as a condition of entry into a particular culture or sub-culture. He differentiates between two kinds of schematic knowledge; ideational and interpersonal. These are similar

to Carrell's content and formal schemata concepts. Ideational knowledge refers to knowledge of how language serves as a device for forming propositions about the world, while interpersonal knowledge refers to knowledge of how language serves to perform a social action. The language user in Widdowson's approach has an active role to play in the negotiation process. It is not just the text that is considered but also the context in which the learner tries to make sense of the language. The readers of a text try to focus on the features of circumstances of utterance that they believe relevant. This suggests that readers are actively involved in the process of interaction with the writer.

Cathy M. Roller (1990) reports some of the basic approaches which have been used to investigate the effects of world knowledge on reading comprehension. Some of the researchers focused on the manipulation of the knowledge variable but not on the text. One technique is either providing or not providing a background picture, a title, or a perspective when subjects are exposed to vague passages. Another technique is to select readers with different levels of knowledge about the passage topics, based on differences in cultures or differences in level of expertise. Another group of researchers use the crossover design in their investigation of the effect of background knowledge on reading comprehension. In this type of design, the manipulation includes both the readers and the passages: two groups of subjects are given two passages on two topics each of which is familiar to one group but unfamiliar to the other. A third group examined the effect of reader's prior knowledge when it contradicts the information in the text. The activation of such knowledge may result in total misunderstanding of message or better comprehension.

Anderson, Spiro and Anderson (1978) and Roller (1985) performed two studies using unusual techniques. In the first experiment, the researchers focused on the text, rather than the reader and also the relations between concepts. Food items were introduced to the subjects in two settings: a supermarket visit and a restaurant meal. It was reported that recall for food items in the restaurant setting was better than that of the supermarket visit. In Roller's study, subjects were introduced to a fictitious insect schema that was considered new information. The observation of the effect of newly acquired information on comprehension of prose passages related to the schema showed that knowledge effects were found on an important rating task, but not on a summary task (see Roller 1990).

Studies which adopted one or more of the approaches mentioned above have demonstrated the strong effects of the background knowledge on reading comprehension.

4.5.1 CONTENT SCHEMATA

The research concerned with the effects of content schemata on reading comprehension of ESL learners are numerous. They include the studies by Gatlinton and Tucker (1971); Steffensen, Joag-def and Anderson (1979); Gayle L. Nelson (1986); Patricia Johnson (1981,1982); Carrell and Eiserhold (1983); Pearson, Hansen and Gorden (1987); Stevens (1980,1982); Reynolds, Taylor, Steffensen, Shirely

and Anderson (1982); Anderson, Reynolds, Schallert, and Goetz (1977); Bransford and Johnson (1972, 1973); and Hudson (1982).

The study by Steffensen, Joag-def, and Anderson (1979) is a good example of this kind of research. It has provided us with the firmest empirical evidence which supports the hypothesis that cultural knowledge and belief influence what is comprehended from text. Steffensen et-al used two groups of subjects, a group of Indians (natives of India) and a group of Americans. Each group read and recalled two texts, one about a typical American wedding and one about a typical Indian wedding. The two texts were in the form of a personal letter. The authors tried to control the syntactic complexity. The results show that subjects read what for them was the native passage more rapidly and recalled a large amount of information from culturally familiar text. Both groups engaged in elaborations and distortions; they produced more culturally appropriate elaborations of the native passage and produced more culturally based distortions of the foreign passage. The authors conclude that readers from distinctly different national cultures interpret texts differently. It is the background knowledge of content underlying a text that helps readers understand and recall such text in an effective way.

In her investigation of the effects on reading comprehension of building knowledge, Patricia Johnson (1982) emphasized the pervasive influence of cultural schemata on comprehension and memory. The subjects of the study were seventy two students representing twenty three nationalities from advanced level reading classes. They were asked to read a passage and recall the story in written form without reference to the text. The text was about the celebration of Halloween. The reading had two sections: one section contained information assumed to be familiar to the subjects and the other section contained information believed to be unfamiliar to even native readers. The students were also given a vocabulary cloze test two weeks after being exposed to the text. The findings of the study show that background knowledge of the American culture seem to affect ESL students' comprehension of a passage on a topic of an American custom, Halloween. It seems that topic familiarity of a passage provides information about the interpretation of such passage in terms of personal knowledge. The results also indicate that effective reading comprehension of the passage is due to real experience within the cultural context.

Jonson (1981) also compared the performance of Iranian and American students reading folktales based on their own cultures. She found that "culture of origin of story had more effect on comprehension than the level of syntactic complexity." (p.169).

Another study by Gayle L. Nelson (1986) examined the culture's role in reading comprehension. The sample of the study consisted of twenty seven Egyptian students whose native language is Arabic. Students were asked to read eight passages and answer eight quizzes. The passages discuss different topics about Egypt and America. Obviously, the students' performance was significantly higher on the Egyptian passages. The author suggests that students recalled significantly more when reading passages from their own culture. It was clear that even in the postexperiment discussion, additional cultural components were activated. This was clearly noticeable when many of the students thought of the Egyptian story "The

conjurer made off with the dish" was humorous whereas the American evaluators of the reading material felt the story was sad. The humor was basically based on cultural aspects. It was an extension of the prior experience and familiarity of the event which are activated during the process of reading comprehension. The research on cultural schemata also focuses on the education of children from different subcultures. The assumption whether these children obtain common schemata is still questionable.

Reynolds, Taylor, Steffensen, Shirley, and Anderson (1982) investigated the relationship between cultural schemata and reading comprehension. The subjects in their study were 105 eighth-grade students who attended school in the United States of America. Black and white students read a letter that dealt with an instance of "sounding" or "playing the dozens" a form of verbal insult predominantly found in black communities. The evidence obtained from the subjects recall protocols indicated that the subjects' perceptions of the cafeteria incident as either ritual insulting or a fight was related to culturally-based knowledge and belief. Black subjects interpreted the letter as being about verbal play, whereas white subjects interpreted it as being about physical aggression. The results of this study strongly support the view that cultural schemata influence reading comprehension.

Carrell and Eisterhold (1983) have investigated the usefulness of the notion of the schema theory for second language reading. Their research has found that activating content information plays a major role in students' comprehension and recall of information from a text.

In a study by Bransford and Johnson (1972), the authors illustrate how comprehension depends on the activation of relevant knowledge. Two groups of students listened to a passage, the first group was not provided with any information related to the passage while the second was supplied with an appropriate knowledge context in a form of a picture. The first group of students rated the passage as very incomprehensible while the second group managed to make sense of the text and accordingly rated it as comprehensible. It is the availability of the appropriate knowledge and the activation of such knowledge that facilitates reading comprehension.

Stevens (1982) investigates whether direct teaching of background knowledge concerning a topic will have an effect on the students' reading performance on that topic. Six classes of tenth grade students were used in the experiment; three classes were taught a lesson on the Texan War while the other three classes were taught a lesson on the U.S. Civil War. All subjects were then asked to read the passage about the battle for the Alamo during the Texan War and answer the questions. The researcher reported that students who were provided with background knowledge about the topic (Texan war lesson) performed better than those who were taught about the U.S. civil war. So, teaching background knowledge of a topic to readers can improve their reading comprehension on the material concerning that topic.

The influence of religion-specific background knowledge on the listening comprehension of ESL students of varying religions has been examined by Markham and Latham (1987, PP. 157-170). The researchers used passages describing prayer rituals of Islam and Christianity. Their results show that

religious background influences listening comprehension. Their subjects recalled more information and provided more elaborations and fewer distortions for the passage that related to their own religion.

Barlett's attempt to assess the effect of beliefs on learning and remembering of information in brief text was an area of interest to some other researchers. The study by Read and Rossen (1981) was an example of such research. The subjects of their study were people who were either for or against nuclear power. They were given a passage about fire at a nuclear power station and were asked to answer questions on a multiple choice text that was introduced immediately after the passage. Although the results showed little influence of beliefs, subjects tended to distort the passage in a manner consistent with their beliefs when the test was delayed one or two weeks (cited in Anderson and Pearson, 1984).

4.5.2 FORMAL SCHEMATA

The effect of rhetorical organization of a text on reading comprehension has also been approached differently by researchers. In some of these studies, subjects read both a well-organized version as well as a scrambled one. The point is that the rearrangement of the sentences or paragraphs causes some kind of disruption between the ideas in the text. Some researchers adopted other techniques; they created certain texts that either included or did not include structural material (i.e. topic sentences and signaling). A different group of investigators manipulated the effects of structure on comprehension by substituting pseudowords for content words. The basic idea is to know to what extent readers use structural information by eliminating world knowledge cues. Two other approaches have been employed to study the effect of structure on reading comprehension. The first approach focuses on the study of structure effects by either measuring readers' structural awareness or teaching them study strategies related to the text structure (or both) before they read the passage. The other approach is concerned with the comparison of readers' performance on the text segments that occurred at different levels of a hierarchy representing the organization of the text (Roller 1990:82). The results of the studies underlying the approaches mentioned above were very confusing. Some of them suggested that there is a strong structural effect while others reported inconsistent findings.

The research concerned with the effect of formal schemata on reading comprehension includes the studies by Mandler and Johnson (1977), Meyer (1975), Meyer and Rice (1984), Thorndyke (1977), Carrell (1981a,1984) and Urquhart (1984).

Carrell (1984) investigated how ESL readers interact with different types of rhetorical organization of expository prose (mainly comparison, causation, problem/solution and collection of description). Ninety six subjects participated in the study but the analyses were conducted only on eighty students. There were four native language groups : Spanish, Arabic, Oriental (Korean and Chinese) and other (mainly Malaysian). The researcher used four versions of a single passage in order to control for the structure and the content of the information. The content was identical in the four versions while the

discourse structures differed. The research results indicate that there are differences among the four types of rhetorical organization of expository prose on the reading recalls for ESL readers. The differences among the four native language groups were clear. It seems that ESL readers depended on their native language background when they reproduced ideas in their free written recall. In addition, if ESL readers recognize and utilize the discourse structure of the original text in organizing their own recall; they will be able to recall more information from the original text.

The effect of rhetorical ordering on readability was the focus of Urquhart's paper (1984). It was assumed that a text is considered more readable if it could be read more quickly and remembered more easily. Two organizational principles are examined in the time order and space order. In time order experiment, forty four Scottish secondary school students were tested for speed and recall. Two pairs of textualizations were used: the first two experimental texts were originally taken from a text which is part of a passage while the original of the second pair of texts was taken from a newspaper. It should be noted here that both time ordered textualizations were faster to read and one was significantly easier to recall. When the experiment was replicated with a large group of a hundred students both time ordered texts proved significantly easier to recall and one faster to read. The experiment indicates that there is a tendency towards re-ordering the text in a time order direction for recall purposes. This supports the rhetorical claim that if speed and recall are being aimed at, time order is then desirable to facilitate the learning of a text. In the space ordering experiment, two texts (A&B) were chosen to serve as the basis for alternative textualizations. The two texts refer to the appearance and the spatial relationships between the internal parts of the objects described. The results show that the scores (in the free recall) for the "A" linear version are significantly higher than those for the "B" version. It is worth noting that the linear versions did not prove faster to read, but did prove easier to recall than the non-linear equivalents (P.175) The author emphasizes that, in both time and space ordering experiments, the re-ordering textualization is not claimed to be superior to the original. The argument is that the reader comprehends and remembers an ordered sequence of events as they occur in time. From a practical point of view, we can say that simplification of text facilitates the learning of such texts particularly if some kind of quantitative recall is being aimed at.

But it is important to say that the writer of the original text(s) may not have this kind of learning in mind. The writer may assume that the reader is already familiar with the information presented in the earlier stages. The current events, which are the focus of the reader's interest, may be considered more important to the writer than other events and this causes him to front them. In this case the text lost its time ordered sequence. These findings are consistent with Widdowson's (1990) point of view about negotiation of meaning. He says that "the writer is engaged in a kind of vicarious interaction with a presumed reader and anticipates and provides for likely reactions. The reader for his part is drawn into the discourse role that the writer has cast him in" (108).

Horiba, van den Broek, and Fletcher (1993) examined the role that structural properties of texts play in mental representations of second language readers. Their primary focus was to investigate the extent to which second language readers of English used structural properties of text (causal factors, story-grammar category, and hierarchical level) to fill in gaps in their mental representation. The researchers reported that L2 readers recalled event statements on the causal chain better than those off the causal chain, and event statements with many causal connections to others in the text better than those with few connections. The data also indicated that certain story-grammar categories such as goals and outcomes were more memorable than actions and reactions for L2 readers. This is a sign that L2 readers may have made extensive use of the content structure of a text in trying to construct a coherent text representation when their comprehension broke down. In other words, readers used the structural knowledge in a top-down fashion to fill in the gaps in their representations as part of their regular reading.

4.5.3 THE SIMULTANEOUS EFFECT OF CONTENT AND FORMAL SCHEMATA

Empirical research studies which investigate the simultaneous effects on ESL reading comprehension of both content and formal schemata include the studies by Bartlett (1932), Kintsch and Greene (1978), Mandler, Scribner Cole, and De Forest (1981), and Carrell (1981a, 1987).

Carrell (1987) used two groups of high intermediate level ESL students who were of the Muslim and Catholic religions. In this study religion is considered the basis of the cultural aspects of each group. The author claims that this does not mean that religion is a stronger determinant of cultural identification than others (i.e. national origin). Two texts based on religion (as the defining characteristic of each cultural group) were used in the experiment. Subjects were asked to read and recall the texts and answer a set of multiple-choice comprehension inference questions on the text. Within each group, one half of the subjects read a familiar well-organized rhetorical format and the other half read the unfamiliar, rhetorically altered version. The findings of this study show that when both content and rhetorical form are familiar, reading is relatively easy, while, on the other hand, it is relatively difficult when both are unfamiliar. In addition, it seems that content schemata affects reading comprehension to a greater extent than formal schemata in the case of the mixed conditions (familiar content, unfamiliar rhetorical form, unfamiliar content, familiar rhetorical form). This does not mean that the rhetorical form doesn't have an effect on comprehension. In fact, it plays an important, but a different role in ESL reading comprehension. These results support previous findings presented by Steffensen et-al.

4.5.4 SCHEMATA AND CULTURAL LEARNING AND TEACHING

We all know that second language students come to the classroom with an accumulation of prior experiences and knowledge through which they interpret the world around them. Part of this knowledge is

the use of language through which they communicate and share their experiences with others. In a second language context, students acquire a new means of encoding and representing these experiences when communicating and this requires not only grammatical competence (Hymes, 1972) but also the ability to comply with the norms that regulate communication within any given sociolinguistic context. In turn, second language teachers attempt to give learners more than the grammatical competence to help them be aware of the way native speakers use the particular language for social intercourse. Indeed sociolinguistics is a necessary and natural extension of the linguistic disciplines; an issue which must be considered by second language teachers. Our observations of what native speakers do when they interact provide teachers with insight into the culture-specific pragmatic uses of language as well as deeper understanding of the values and norms of the culture.

The study of culture plays a significant role in second language pedagogy. It is difficult to imagine a foreign language lesson that does not include some sort of spoken or written text or even a visual image which refers to a particular aspect of life in general and culture in particular. Class activities that deal with culture issues can vary from introducing individual cultural concepts to a detailed description of scene in a foreign country. This may be followed by a discussion and probably an evaluation of the way of life in this country. In such class activities students and possibly teachers may or may not approach the references to the foreign culture in a way different from that provided by the scenes, pictures, or discussions. In all cases the foreign language is the medium through which they attempt to describe their own world or fit in what they have learned into their existing knowledge. So, cultural studies (Byram, 1989) include information, knowledge or attitudes about the foreign culture which are evident during foreign language teaching. These cultural components are taught and learned in an explicit as well as implicit way in second language courses. Teaching and learning them occur consciously and incidentally and this has to be taken into consideration in the second language teaching area.

The schema theory outlined above has a lot to offer in the teaching and learning of culture. From an early age, the child starts to internalize schemata knowledge from the recurrent events that occur within sociocultural context (social space); that is the environment in which he lives and the people with whom he comes into contact. Both the child's social space and his knowledge expand along with his growth. On the basis of schemata as viewed by Rumelhart (1980), learning goes through three processes: accretion, tuning and restructuring. Accretion is a common type of learning during which the information processed by schemata are laid down in memory. Tuning is the process during which the learner modifies an existing schema to bring it more into line with a particular experience or number of similar experiences. Restructuring is the creation of new schemata by "patterned generation" and "schema induction." I will not further discuss these notions since they were tackled in the above section but what should be emphasized here is that schema are created in the child as a result of social interaction. Then they are modified, tuned and serve as a basis for restructuring under the influence of new experience. As we can see, there is a link between the concept of social space and the concept of knowledge schemata. In other

words, the psychological process of the acculturation can be linked to the analysis of cultural meanings in the adult world through the notion of schemata, and some schemata can be captured in linguistic analysis. Michael Byram (1989) explains this relationships as follows: “ The analysis of the concepts of a specific culture is simultaneously an analysis of the schemata with which individuals order their experience. An analysis of the modifications which an individual makes as his “social space” extends is an analysis of his acculturation to the different dimensions of the whole culture to which he is gradually exposed. Schema analysis would lead to an account of concepts and their interrelationships which are the meanings of a particular culture” (p. 109).

Thus, the study of the relationship between a culture and the individuals living within it plays a significant role in second language pedagogy. Culture is understood here as structured and interconnected networks of meanings which are largely but not exclusively embodied in linguistic formulations. It shapes the individual’s behavior, knowledge, beliefs and skills and all of these are developed under the guidance of older people. As they learn, children’s social skills and knowledge undergo several changes which result in the formation of the schemata of their knowledge. This schemata enables them to interpret and classify their experiences of the world around them. So, culture becomes part of the student’s whole being over a period of time. He internalizes culture by the help and guidance of adults and by being exposed to others within his society. The child learns culture through a series of steps which have been carefully structured by others. While learning cultural aspects, his “social space” expands and accordingly he acquires new and modified schemata of knowledge. The pupil goes through many experiences during which he constantly shares, negotiates, reconsiders and reconstructs the meanings of his environment and culture.

As far as second language teaching is concerned, gaining knowledge of the commonalities between two languages or the universal features of language is beneficial for teachers in understanding the total language learning process. Although we can recognize different world views and different ways of expressing reality depending on one’s world view, it is also true that we can recognize through both language and culture some universal properties that bind us all together in one world. Generally speaking, in a second language classroom, we do not teach students to think right from the beginning. As we said, learners come to class with a variety of experiences which they have previously learned. What they actually do is that they try to make positive use of prior experiences to facilitate the process of learning by retaining that which is valid and valuable for second culture learning and second language learning.

Second language teaching pedagogy should aim at changing students’ attitudes towards other cultures which is also dependent upon change in cognitive structures. Cultural studies should focus on cognitive structures that reflect cultural meanings particularly schemata which mark the boundaries between one society and another. The extent to which learners experience other cultures is determined by the schemata which embody the learners’ sense of their own ethnic identity. If the learners perceive others in a particular way and their attitudes towards them change accordingly, so these schemata need to change

too. The change occurs when learners experience a foreign phenomenon which can not be dealt with by their existing schemata. For example, for the change to take place, it will not be adequate to bring them into contact with foreign cultures and people otherwise our aim will be a different one, that is; to reinforce the concept of what is foreign that learners already have and eventually will use to deal with the new phenomena. The classroom situation differs in that the vicarious nature of the experience will normally mean that existing schemata will cope adequately, and merely be reinforced. This is done through contrasting and showing the difference between students' schemata of what is foreign and their own ethnicity. In this case, it is necessary to confront students with new experiences of their own ethnicity; an experience that is not threatening to them. For instance, teachers can discuss with students how others view their ethnicity. This should be done with the intention that students' existing schemata will change when they can not cope with the new experience. If this experience is non-threatening in nature, then students will be prepared to change their schemata rather than reject the experience by assimilating it to their existing views of foreigners. Teachers' guidance is needed. They must help students to consider foreign views of their culture and be ready to adjust their own to accept these foreign views. Teachers should also prepare their students to expect these foreign views to be different from their own and that they have to consider them seriously.

Another goal that needs to be emphasized in second language teaching pedagogy is to help students to change their schemata of foreign cultures and peoples in general and the culture under study in particular. The teachers' role is to help students to reconsider their own views of foreigners and be aware of the boundary-marking meanings that people use to maintain their ethnic identity. The teacher's role does not stop at providing students with the new experience, i.e., presenting the particular foreigner's view of his/her own ethnicity, but it extends to include explanations of the concepts of the discipline underlying the cultural studies (social anthropology). By doing so, the teacher helps students to cope consciously with the new experience.

CHAPTER 5

METHODOLOGY

5.1 DESIGN

As established in chapters two and four, since reading comprehension is affected by the background knowledge of the learner, which itself plays a vital role in how learners approach different types of texts, this study was designed to examine the role of background knowledge in comprehending expository prose. More specifically, the research will examine how learners process and comprehend the collection of description text type which is believed to be the loosest type of text (Meyer 1984). The study will also investigate whether native culture, traveling, linguistic and culture difficulty have an effect on the quantity and quality of recall. The item analyses will reveal the kind of T-units recalled (main ideas, subordinate ideas, or specific details) as well as any additions and distortions made by subjects.

Based on the above mentioned points, the research will follow a model of inquiry which replicates earlier studies in the area but will focus on a different type of text (collection of description) and its effect on the reading performance of high school students who belong to two far distant cultures, namely the Egyptian and Danish.

5.2 RESEARCH METHOD

5.2.1 RECALL PROTOCOL AS A MEASURE FOR READING COMPREHENSION

The method of using recall protocols as a measure of reading comprehension has been employed throughout the literature (Bernhardt, 1990, 1991a; Carrell, 1984a, 1984b, 1985, 1987; van den Broek & Fletcher, 1993; Meyer, 1975, 1977; Roller & Matambo, 1992; Stefenson & Joag-Dev, 1984; Urquhart, 1984). The recall procedure usually involves having subjects recall, either in written or oral mode, everything that they are able to remember of the text which they have read, without that text being present. Traditional analyses of protocols are quantitative and attempt to measure the amount of information recalled in relation to the original text. Quantifying comprehension is achieved by breaking the original text into idea units or propositions and checking the recall against this list of idea units. Qualitative analyses have been used by several researchers among whom are Bernhardt, (1990, 1991b) and Lee (1986, 1990). These researchers employ qualitative analyses, especially of reader error, in an attempt to explain text comprehension by examining those points in the process where readers go astray.

The motivation of using recall protocols comes from the assumption that people can remember what they have understood (Appel & Lantolf, 1994). This implies that the recalled text to some extent ought to reflect the comprehension product. Thus, the protocol offers some information on how the text was reconstructed. By examining the recall protocol, one can see what information was integrated into the reconstruction and how that information was organized (Bernhardt, 1991b).

Some researchers argue that there are other procedures that can measure reading comprehension better than recall protocols two of which are open-ended comprehension questions and think aloud procedures. Open-ended comprehension questions are believed to offer a more accurate insight into what the reader has comprehended (Ballstaedt and Mandl, 1987). Those who are in favor of open-ended comprehension questions believe that the recall protocol is susceptible to the particular writing habits as well as to the motivation of the subjects. On the other hand, both the open-ended and multiple choice question are criticized as being effective global assessment measures (Bernhardt, 1983, 1991b). This is especially true of the multiple choice test, where the instrument in fact suggests possible answers, and which very often can be answered correctly independent of having read the text. In addition, these types of questions become additional sources of information, and may cause the reader to alter his or her representation of the text during the procedure. The test instrument itself would affect the comprehension product, without providing evidence of its doing so (Bernhardt, 1983).

The think aloud procedure received a lot of attention from several researchers as a measure which can reveal what is going on at the time of comprehension (Horiba, 1983; Trabaasso & Suh, 1993), Trabasso & Magliano, 1996). The advantages and disadvantages of the think aloud procedures will be explained in detail in chapter 7.

In this research two procedures were used. In the first phase of the study (chapter 6 & 7), the recall protocol was employed while in the second phase (chapter 8), I used the think aloud procedure. The present study adopts the recall protocol as its assessment measure, largely because the protocol does seem to reflect comprehension, that is, the propositional content of the text reconstruction, as well as the organization of the propositional content. Bernhardt (1991b), argues that, among other reasons, the recall protocol is a good measure precisely because "generating recall data does not influence the reader's understanding of a text" (p. 200).

5.2.2 METHOD OF SCORING RECALL PROTOCOL

In research like this one, two different criteria of scoring recall protocols are employed- a loose (Carrell, 1984) and a strict criterion (Mandler 1978a; Roller, 1992). In the loose criterion, distortions are allowed-cases in which most or part of the meaning is correctly recalled or paraphrased, but which included some distortions of the original meaning. In the strict criterion, distortions are not allowed, although obviously, paraphrases are. The recall data reported in this research are limited to the loose

criterion with some changes made to serve the purpose of the experiment. Any distortion is accepted as long as it does not deviate completely from the original. For example, a student wrote that ancient Egyptians used onions in producing drugs that could kill germs and cure diseases. This kind of distortion is not accepted simply because the passage only mentions that onions are believed to have healing power and used to treat and cure children, so Ancient Egyptians used it as medicine. Also additions are allowed if they don't carry new ideas or information that is not mentioned in the original passage. If a subject goes on to describe in detail what they do in the game "Knocking the cat out of the Barrel" in the Danish related text, such T unit is not counted. This does not mean that elaborations and distortions are neglected. On the contrary, the researcher allowed slight additions and distortions. In addition, data collected from distortions and elaborations are examined (not analyzed) in order to fully understand how and why the subjects come up with such ideas. In other words, whether it is due to the subjects' background knowledge of the text content and what strategy leads them to such conclusions. This is not to say that distortions and additions are available for separate quantitative analysis in the current research.

The loose criterion seemed appropriate for scoring the recall protocols of the low intermediate-level EFL readers who participated in this study. Following Carrell (1984), due to their inexpert control of vocabulary and grammar of English, it is difficult to tell whether what appeared as slight distortion or as reasonable additions are really such and hence, due to schema effects, or whether they are due to inexpert control of English grammar and vocabulary. It was decided to give these EFL readers the benefit of any doubt and not to penalize them for vocabulary and grammatical shortcomings. Therefore, only the loose criterion was used in scoring their recall protocols, and no arbitrary decision had to be made as to whether the information recalled was distorted or added to or not. If the information met the loose criterion, it was counted as having been recalled.

Additions produced by subjects in this research include the following (1) redundancies, i.e., saying the same thing twice, often in a slightly different way, (2) reasonable presuppositions in which obviously inferable material was added to the original idea, (3) irrelevant or wrong information added to an otherwise correctly recalled idea. This latter kind of information was in contrast to reasonable presuppositions and exaggerations. Thus, if there was virtually any recognizable piece of the meaning of the idea present in the recall, the idea was scored as being recalled. Otherwise, it was scored as missing.

5.2.3 CLOZE TEST

Cloze tests have been widely used by many researchers and teachers to measure students' linguistic abilities. They are looked at as easily constructed and scored measures of integrative proficiency. They are still popular among teachers and educators even if they are criticized for a number of reasons. Researchers have been interested in what exactly cloze test measure as well as their reliability and validity. Another issue is whether to treat all cloze tests in the same manner because of the random

nature of the deletion process. Alderson, (1979) and Klein-Braley (1984, 1985) reported that the students' performance on the tests they received (using different proficiency deletion rates on different texts) resulted in different proficiency measures. They basically question the validity and reliability of cloze tests and recommend thorough investigation on both aspects if cloze tests are to be considered.

On the other hand, other researchers such as Heilenman (1985, 1990), Bachman (1982) and Brown (1980, 1988, 1989) have reported that cloze tests could be used as integrative proficiency measures (highly reliable) if careful considerations are to be taken. These steps are: (1) the careful selection and preparation of several alternative tests at appropriate levels of reading difficulty; (2) the pretesting of these tests to determine which have the best reliabilities and difficulty indices, thereby providing the best discrimination among the test takers (Brown, 1980); (3) rewriting the final selection to ensure that all language functions are examined equally; and (4) a last pretesting of the chosen form.

There has been evidence in the body of literature that supports the cloze test technique as a reliable test that can predict the learners' linguistic abilities. This positive view of cloze tests made them attractive as they are easy to construct, administrate and score.

There are different ways of constructing cloze tests. The most common type is to select a reading passage and delete a certain number of either content or function words (usually every seventh word). The test taker has to write the original words after carefully reading the passage. A second type of the test is cloze-elide technique in which test takers have to identify incorrect words that have been inserted into the reading passage. Another technique is the C-test: instead of whole words, it is the last part of every second word which is deleted.

The first type of cloze test is used in this experiment with adaptation made by the researcher. A summary of each of the original passages which students already read and recalled is presented with ten content words deleted. These words are believed to be culturally based. The purpose of deleting content words and not function words is to examine the students' overall reading ability and how they can draw specific inferences and recognize main ideas from the texts. Therefore, it is important for the subjects to read and comprehend the passages (the summaries) carefully in order to write the appropriate word(s). In order to do so, they have to refer to the part of the passage which contains the correct answer as well as activate the appropriate schematic knowledge that corresponds to it. For example, in order to write the appropriate answers for number 4, 5, and 6 on the Egyptian text, the subjects have to know the role which the onion played in ancient Egypt. Also, subjects need to know the legend of the "Shammamah" and what it symbolizes in order to write the appropriate words in 9 and 10. Similarly, items 2, 3, 5, and 6 on the Danish text require subjects to activate the appropriate schema of the role of Shrovetide buns in celebrating "Fastelavn".

5.2.4 THE QUESTIONNAIRE

The questionnaire was designed to provide additional information about the subjects and their opinion about the texts they read. It consists of three types of questions. First, personal questions such as age, number of years learning English, travel history, having foreign friends, etc.. Second, a set of questions which were about the familiarity and level of difficulty of the passages. For example, they had to rate the passage familiarity on a 1-5 scale (1=new, 5=very familiar). They also were asked to specify whether language or culture caused comprehension difficulty. Finally, they were asked to give reasons other than language or culture and other general comments they wanted to say about the reading task.

5.3 PROCESSING DATA

5.3.1 SUBJECTS

The study consists of one hundred high school subjects: fifty Egyptians and fifty Danish. The Egyptian group consisted of twenty one males and twenty nine females while in the Danish group there were twenty males and thirty females. The Danish subjects are enrolled in a three year course called "Gymnasium" leading to upper secondary school leaving examination, which qualifies the students for admission to university and higher education. The Egyptian subjects follow a three year course leading to general school certificate examination, which also qualifies students for admission to university and higher education. Schools where the experiments took place were located in the city of Arhus in Denmark and the city of Cairo in Egypt. Students were tested during their regular reading classes. All subjects were chosen on a random basis. The reason is to guarantee a variety of subjects of different reading abilities and accordingly the research will not be biased against either poor or good readers. The teachers also reported that subjects were free of major learning and reading disabilities.

5.3.2 MATERIAL

Two reading passages are used, one reflects the content domain of the readers' background of the Egyptian group (an Egyptian culture topic on Shamm en-Neseem, the smelling of the breeze) and the other reflects the content domain of the readers' background of the Danish group (a Danish culture topic on Fastelavn). Both passages are authentic expository prose that have basic top-level structures. The Egyptian culture passage was taken from "Cairo Today"; a magazine published in Egypt and the Danish culture passage was taken from a book titled "Festivals of Western Europe" written by Dorothy Gladys Spicer (1958).

The passage on the Egyptian culture topic is assumed to relate to the Egyptian readers' background since they have a schema for celebrating the coming of spring (Shamm en-Neseem). On the other hand, the passage on the Danish topic is expected to be unfamiliar to the Egyptian readers as they don't belong to the Danish culture and accordingly they don't obtain the schema for celebrating "Fastelavn". The same notion applies to the Danish group.

The two passages are of approximately equal length (Egyptian passage 399 words and Danish passage 457 words). They also contain nearly the same number of T-units (19 T-units in the Egyptian passage and 23 T-units in the Danish passage). I sliced the two passages into T-units and six raters who are specialized in ESL, reading comprehension and text processing, checked the slicing procedure which I followed and agreed with it. Only one rater thought that the Egyptian text should be sliced into 22 T-units instead of nineteen T-units. The researcher and the other five raters thought that there is no need to slice T-units 2, 9 and 11 since they are not extensions of the main t-units they are attached to and don't carry new information.

A T-unit is "the shortest grammatically allowable sentences into which a theme could be segmented. Each unit is grammatically capable of being considered a sentence. A T-unit (minimal terminal unit) refers to the unit that contains a main clause and any other subordinate clauses attached to it. A clause consists of subjects (or coordinated subjects) and a finite verb phrase (or coordinated verbs or phrases). The T-unit index has the advantage of preserving all the subordination written by students and the coordination between words and phrases and subordinate clauses" (Hunt 1965, PP. 20-21).

On the Smog readability formula by MacLaughlin (1969), the texts were determined to be at the twelfth and fourteenth grade reading levels respectively (Smog grading for the Egyptian passage is 12.21 and for the Danish passage 14.13). As I mentioned above, the two passages were sliced into T-units: a capital letter begins each new clause (see appendix for the sliced passages).

5.4 PROCEDURE

Six ESL classes participated in the experiment representing the two cultures; Egyptian and Danish. The students were tested on two successive days in their regular reading classes. Students were given clear instructions of how the task(s) will be conducted. The instructions were given both in English and the mother tongue (Arabic and Danish) to ensure that the subjects understood the objectives and stages of each task. Instructions on how the tasks should be conducted were also given to the teachers in both English and the mother tongue. On the first day, the Egyptian subjects were asked to read the passage on the Egyptian culture "Shamm en-Neseem" at their normal reading speed and then recall the same passage. Subjects were given clear instructions not to memorize the text but rather try to understand it. They were asked to write as much as they could remember from the passage using their own words or words from the text. Subjects were given instructions to write in complete sentences. During the recall

process, subjects were not allowed to refer back to the passage. Subjects were told that they could spend as much time as they wanted but once they had finished reading the passage, they could not look back at it. They were also informed that they would have a cloze exercise based on the passage they read. On the second day, the Egyptian subjects were exposed to the passage on the Danish culture "Fastelavn" and the same procedures were applied. The questionnaire was introduced between the reading and the recall. The purpose of the questionnaire is (a) to minimize the possibility of discussing the content of the passages with other subjects and (b) to obtain relevant information on the students participating in the experiment. After reading and recalling each passage, subjects were given a cloze test with ten content words deleted and they were asked to provide the appropriate answers. It was assumed that their ability to provide the correct words depended mainly on their understanding of the information presented in the texts. The Danish subjects were treated in the same manner.

5.5 DATA (STATISTICAL) ANALYSIS

Transcripts in the silent reading condition were scored for the amount of text recalled, the number of T-units used, and the number of correct answers on the cloze test. The cloze test is scored on the basis of a model answer prepared by the researcher. The recall protocols were scored by the researcher and another rater. The interrater reliability exceeded .88. Disagreements were settled by a third rater. She is a professional language teacher who has experience with the type of task involved in this research. The researcher used the GraphPad InStat statistical program. This program is designed to help analyze small amounts of data. Data was analyzed using different statistical tests. These tests are: unpaired t test, Fisher's exact test, Mann-Whitney test and one-way analysis of variance (ANOVA). The statistical analysis was conducted by the researcher.

5.6 VARIABLE

The dependent variables of the study were the recall of the T units and the gap-filling test scores and the independent variables were the effect of culture (native, nonnative), difficulty rating, type of difficulty and travel history.

MAIN VARIABLE OF THE STUDY

HYPOTHESIS 1

Egyptian subjects will recall more of the Egypt related text than the Danish native speakers.

HYPOTHESIS 3

Danish native speakers will recall more of the Danish related text than Egyptian subjects.

DEPENDENT VARIABLE: RECALL OF TEXT

This refers to the number of correct T- units recalled from the Egyptian and Danish culturally based texts used in this experiment.

INDEPENDENT VARIABLE

- 1- The familiarity of the Danish text (event) : This is the cultural background of Danish subjects on the "Fastelavn" festival
- 2- The familiarity of The Egyptian text (event) : This is the cultural background knowledge of the Egyptian subjects on Shamm en-Neseem festival

FILL IN GAP TEST

A summary of each of the two texts used in this experiment was prepared by the researcher. Ten words which are culturally based were omitted. Subjects had to write the missing words depending on their understanding of the texts. They were not allowed to go back to the original passages. Subjects scored one point for providing each missing word. Half points were given if answers were close to the original but did not provide the exact cultural concept or idea and does not reflect the subject's full understanding of the concept. Subjects were not charged for spelling or grammatical mistakes as long as the word was readable and conveyed the cultural meaning.

HYPOTHESIS 2

Egyptian subjects will perform better on a **gap-filling** exercise of the Egyptian text than Danish native speakers.

HYPOTHESIS 4

Danish native speakers will be able to perform better on a **gap-filling** exercise of the Danish text than the Egyptian subjects.

DEPENDENT VARIBALE

This is the score each subject gets on the **gap-filling** test for each text; the Fastelavn and Shamm en-Neseem.

INDEPENDENT VARIABLES

- 1- Danish subjects' cultural background knowledge of the Fastelavn festival.
- 2- Egyptian subjects' cultural background knowledge of the Shamm en-Neseem festival.

The recall process started immediately after subjects read the passages to avoid discussion among subjects.

Subjects were asked to recall as much as they could from the original texts. They were also asked to recall in complete sentences. The recall protocols which included recall of individual words were not analyzed. Although it was preferable to recall the exact T units presented in the original texts, ideas which were recalled in the subjects' own words were counted as corrects ones.

ITEM ANALYSIS

The recall of each T unit will be examined in relation to subjects' cultural background knowledge of each festival mentioned above. For example, why do subjects recall particular T units more than others? Does the cultural background knowledge of these EFL readers' affect the recall of a specific T unit? Are T units which are culturally based easier to recall than other T units? The T unit analysis will examine these issues.

HYPOTHESIS 7

Items (T-units) that are closely related to cultural aspects of the text (festival) will be best recollected by those who share that culture.

DEPENDENT VARIABLE: each T unit recalled from both passages.

INDEPENDENT VARIABLES

- 1- T unit representation of cultural aspect(s) of festival
- 2- Cultural background ground knowledge of Egyptian and Danish readers.

THE THINK ALOUD EXPERIMENT

HYPOTHESIS 5

Egyptian subjects will be able to make more accurate predictions relating to the Egyptian text than Danish native speakers will be able to make relating to the Egyptian text.

HYPOTHESIS 6

Danish native speakers will be able to make more accurate predictions relating to the Danish text than Egyptian subjects will be able to make with reference to the Danish text.

DEPENDENT VARIABLE: any correct prediction about ideas in the passages (in the think aloud experiment).

INDEPENDENT VARIABLES

1. Cultural background of subjects
2. Subjects' ability to predict

THE QUESTIONNAIRE

HYPOTHESIS 8

More sophisticated subjects will score better than unsophisticated/less traveled subjects on the culturally-related items.

DEPENDENT VARIABLE

Number of T units correct

INDEPENDENT VARIABLE

Travel history and experience

CHAPTER 6

RESULTS

6.1 INTRODUCTION

This study investigated the effect of background knowledge on the reading comprehension ability of Egyptian and Danish high school students. 100 recall protocols written by subjects, the cloze test answers, and responses to the questionnaire were analyzed. The study has been planned to determine the following :

1. The native culture will facilitate reading comprehension of subjects who belong to such culture (i.e. Egyptian subjects will recall more of the text on Shamm en-Neseem and Danish students will recall more of the text on Fastelavn).
2. Far distant culture may hinder students' reading comprehension ability (i.e. Danish subjects may find difficulty in processing the Shamm en-Neseem text and Egyptian subjects' comprehension of the Fastelavn text may be affected because of lack of cultural information).
3. Egyptian subjects will write additional information relying on their cultural background of Shamm en-Neseem festival and probably make some distortions on the Danish festival of Fastelavn.
4. Danish subjects will elaborate more on the Danish festival of Fastelavn while they make some distortions on the far distant culture festival of Shamm en-Neseem.
5. The Danish native speakers will perform better on the cloze test on the Danish related text than the Egyptian native speakers and vs. versa.
6. Items (T units) that are closely related to cultural aspects will be best recollected by those who share the culture.
7. Elements other than culture may influence students' reading performance i.e. travel history.
8. The 'collection of descriptions' text type used in this experiment will affect the amount and quality of subjects' recall of both texts.
9. Prior knowledge will affect main idea construction.

It is relevant at this point to review the schema theoretic approach and the effect of text type on recall put forward in chapters three and four. Results from the empirical study were analyzed according to these models.

As demonstrated in chapter four the schema theory is based on the assumption that reading comprehension is an interactive process between the reader and the text (Carrell, 1983b, 1983c, 1984, 1987; Carrell and Eisterhold, 1983, Rumelhart, 1977). This means that reading is an interaction between a reader's background knowledge of and processing strategies for text structure, on the one hand, and the rhetorical organization of the text, on the other (Meyer, 1975, 1977). Research on reading comprehension has shown that the ability to understand texts is based on not only the reader's linguistic knowledge, but

also his or her general knowledge of the world and the extent to which that knowledge is activated during the mental process of reading. Both content and formal schemata have an influence on recall of texts. If a reader is able to access background knowledge about either the content area of a text or the rhetorical structure of a text he/she will be able to comprehend, to store in long term memory, and to recall the text (Kintsch and van Dijk, 1975). Several studies have also shown that ESL/EFL readers read, understand, and remember better materials that deal with their familiar culture than materials for which they lack the appropriate schemata (Carrell, 1981a, 1987; Johnson, 1981; Steffensen, Joag-dev, and Anderson 1979).

Certain text types of expository prose are believed to influence the way readers process text. Nile (1970) identified four organizational patterns of internal relationships for expository writing. These are simple listing, time-order, cause and effect and comparison-contrast. Meyer (1975, 1980), a pioneer in expository structural analysis adds another type; the collection of descriptions. She gathered empirical evidence that the comparison-contrast and cause and effect patterns are well organized types which facilitate recall. She also found that the collection, description and the collection of descriptions types are the loosest organizational patterns. They are difficult to follow and result in poor recall performance. When processing these texts, readers get confused and become unable to distinguish between important ideas and specific details.

In the following section, I will present the results of an experiment conducted on EFL students in Egypt and Denmark. Students were enrolled in their secondary school programs. They were tested during their normal reading sessions. It was hypothesized that their cultural background knowledge would help them understand and recall texts related to their culture. The effect of text type on their recall was also examined.

6.2 SUMMARY OF THE RESULTS

The Egyptian related text was sliced into 19 T units and the Danish text was divided into 24 T units. The highest number of ideas recalled from the Danish text by the Egyptian subjects was 13 T units (54%) while the highest number scored by the Danish subjects was 14 T units (58%). There were seven Egyptian and fifteen Danish subjects who scored more than ten T units. Four Egyptian subjects and five Danish subjects were able to recall only 50% of the Danish passage.

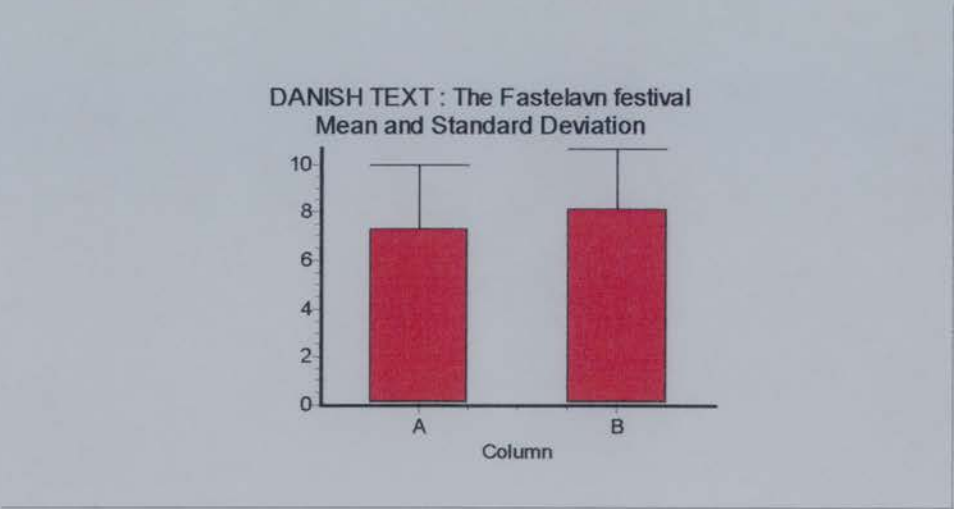
6.2.1 THE OVERALL PERFORMANCE OF DANISH AND EGYPTIAN SUBJECTS ON THE DANISH TEXT (FASTELAVN FESTIVAL)

The means and standard deviations for Danish and Egyptian subjects' recall of the Fastelavn text are presented in Table 1. The mean score for the performance of the Danish subjects was 8.1 versus 7.3 for the Egyptian subjects, $p < 0.0962$. Although there was no statistical significance between the two means,

the Danish subjects performed better than the Egyptian subjects as expected. They recalled more T units from the Danish related passage than the Egyptian readers (54% of the Danish group recalled more T units compared to 32% of the Egyptian group leaving 14% of equal recall scores). In the Danish group the lowest score was four and the highest was 14. The lowest score obtained by Egyptian subjects was zero while the highest was thirteen. The median for both groups was eight for the Danes and seven for the Egyptians. From the results obtained from the unpaired t test, it seems that the cultural background of the Danish subjects affected their reading comprehension of the Fastelavn text. These results confirm the third hypothesis which predicts that Danish readers will perform better on the Danish related text than the Egyptian readers. There may be factors that caused the results not to be significant. The number of subjects in each group may be considered a factor in not achieving a high statistical significance among the two groups (i.e. a larger sample may achieve this significance). The subjects' linguistic and reading abilities and the organization of the text may also have a great influence on their recall (see chapter seven for further discussion).

Figure 1

The overall performance of Egyptian and Danish subjects on the Fastelavn text
Unpaired t test



Column A : Egyptian subjects
Column B : Danish subjects

Table 1
Recall of Fastelavn text

Subjects	N	Mean	Range	SD	P. value
Egyptian	50	7.3	00 – 13	2.668	0.0962
Danish	50	8.2	4 – 14	2.447	

N: Number of subjects

Note: Median for Egyptian = 7 and for Danish = 8

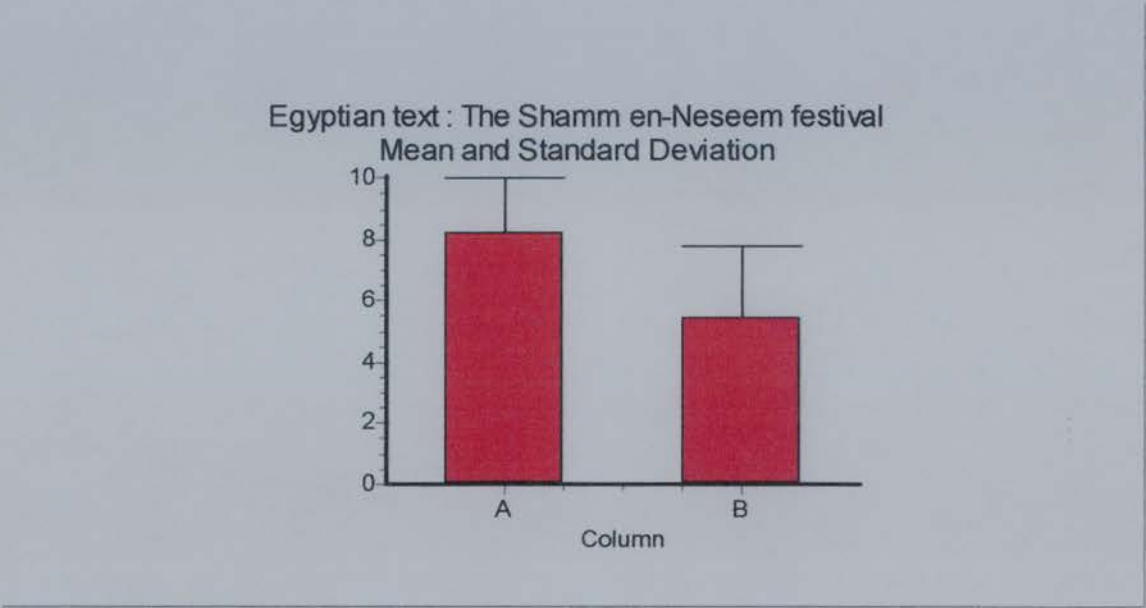
6.2.2 OVERALL PERFORMANCE OF DANISH AND EGYPTIAN SUBJECTS ON THE EGYPTIAN RELATED TEXT (SHAMM EN-NESEEM FESTIVAL)

Table 2 presents the means and standard deviations for Danish and Egyptian subjects' recall of the Shamm en-Neseem text. Statistical analysis of the data was by means of Mann-Whitney Test. The overall performance of the Egyptian subjects on the Egyptian related text was significantly higher than the Danish subjects. The mean score for the Egyptian subjects is 8.2 versus 5.5 for the Danish subjects, $p < 0.0001$.

As expected, the Egyptian readers recalled more T units from the Shamm en-Neseem text than the Danish readers (70% of the Egyptian subjects recalled more T units compared to 22% of the Danish subjects leaving only 4% of equal recall scores). The highest score obtained by the Egyptian readers was 13 and the lowest was 6 (median was 8). In the Danish group, the highest score was 11 and the lowest was 2 (median was 5).

These results support hypothesis one which predicted that the Egyptian native speakers would recall more of the Shamm en-Neseem text than the Danish native speakers. The results from Mann-Whitney test supports the claim that the background knowledge of the learners influences students' reading comprehension. Familiarity with the festival results in successful recall of many T units and hence, comprehending the passage.

Figure 2
Mann-Whitney Test



Column A : Egyptian subjects
 Column B : Danish subjects

Table 2
Recall of Shamm en-Neseem text

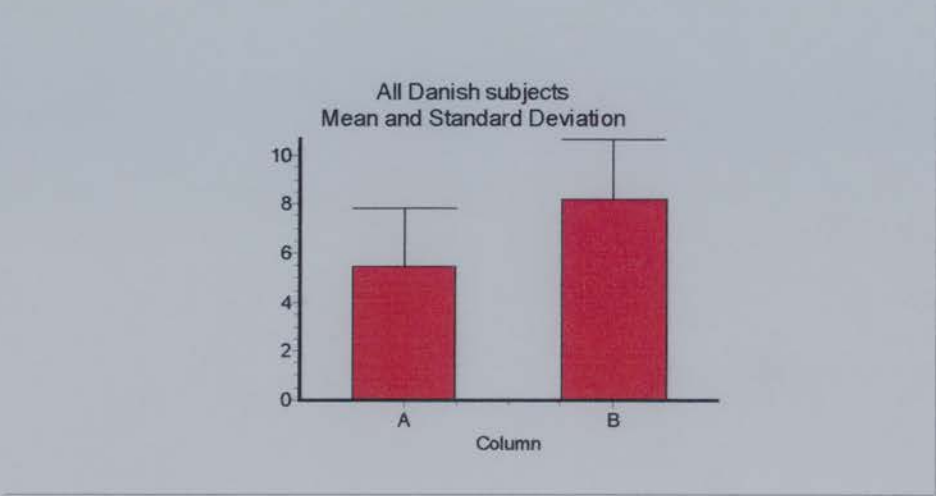
Groups	N	Mean	Range	SD	P. value
Egyptian	50	8.2	6- 13	1.810	0.0001
Danish	50	5.48	2 – 11	2.332	

N : Number of subjects in each group

6.2.3 THE RECALL OF DANISH SUBJECTS ON THE SHAMM EN-NESSEEM AND FASTELAVN TEXTS

A comparison between the performance of the Danish readers on both Shamm en-Neseem Text and Fastelavn text was conducted by using Mann-Whitney statistical test. The results presented in Table 3 show the means and standard deviations and errors for the Danish subjects' recall scores on both passages. The Danish readers recalled more T units from the Fastelavn text than they did on the Shamm en-Neseem text (88% of Danes recalled more from the Fastalavn text compared to 6% who recalled more of Shamm en-Neseem text, leaving only 6% of equal scores on both texts). The mean scores were 8.18 and 5.48 respectively. The difference between the two means ensures that there was a great statistical difference, $p < 0.0001$. The findings confirm hypothesis 3 since the Danish readers' performance was much higher on the text related to their own culture "Fastelavn festival" than their performance on the Egyptian related text "Shamm en-Neseem". These findings support Carrell's claim (1984,1987) that cultural background knowledge plays a significant role in recall tasks.

Figure 3
The overall performance of Danish subjects on The Fastelavn and Shamm en-Neseem texts
Mann-Whitney



Column A : Recall of the Shamm en-Neseem text
Column B : Recall of the Fastelavn text

Table 3
Mann-Whitney Test

Danish subjects (n. 50)

Texts	Mean	SD	SE	Minimum	Maximum	Median	P. Value
Shamm en-Neeem	5.48	2.332	0.3398	2	11	5	0.0001
Fatelavn	8.18	2.447	0.3460	4	14	8	

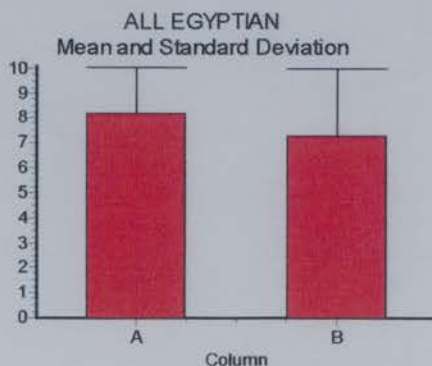
6.2.4 THE RECALL OF ALL EGYPTIAN SUBJECTS ON THE SHAMM EN-NESEEM AND FASTELAVN TEXTS

A similar comparison was conducted to examine the recall scores of the Egyptian readers on both texts presented in this study. The data was analyzed by means of Mann-Whitney Test. The results presented in table 4 shows that there was no statistical significance between the two mean scores of the Egyptian subjects, p. 0.0825. However, their recall scores on the Shamm en-Neseem text was higher than their scores on the Fastelavn text (the means were 8.2 and 7.3 respectively). In the Egyptian group, 52% of the subjects scored higher on the Shamm en-Neseem text compared to 32% on the Fastelavn text leaving 16% of equal scores on both texts. Although the difference is not high enough to claim a great influence of the familiarity aspect, one can still suggest that the cultural background knowledge of the learners affected their comprehension of both texts. The Egyptian subjects' content schemata has helped them understand and recall more of the Egyptian related text. The results reported here support the hypothesis 1 mentioned earlier.

Figure 4

Mann-Whitney Test

The overall performance of Egyptian subjects on the Fastelavn and Shamm en-Neseem texts



Column A : Recall of the Shamm en-Neseem text

Column B: Recall of the Fastelavn text

Table 4

Texts	Mean	SD	SE	Maximum	Minimum	Median	P. value
Shamm en-Neseem	8.2	1.841	0.2603	13	5	8	0.0825
Fastelavn	7.3	2.668	0.3774	13	0	7	

6.2.5 COMPARISON OF RECALL PERFORMANCE OF ALL DANISH AND EGYPTIAN SUBJECTS IN ALL CONDITIONS

The total number of T units recalled from Shamm en-Neseem and Fastelavn texts by all subjects were statistically analyzed (see Table 5). The results of the analysis of variance revealed a significant main effect of cultural background knowledge on recall, $p = 0.0001$. The overall performance of Danish subjects on the Fastelavn text was higher than their performance on the Shamme en-Neseem text (mean scores were 8.18 vs. 5.48). Similarly, the overall performance of the Egyptian readers on the Shamm en-Neseem text was higher than their performance on the Danish text (mean score were 8.2 vs. 7.32) While the performance of each specific group of subjects on their culture related text was similar (8.2 vs. 8.18), their performance on the unfamiliar text was quite significant (7.32 vs. 5.48), $F = 14.885$, $p < .001$.

Figure 5
Comparison between Egyptian and Danish subjects recall scores on the Fastelavn and Shamm en-Neseem texts



Table 5

One-way Analysis of Variance of correct T units recalled from Fastelavn and Shamm en-Neseem texts by Egyptian and Danish subjects

Source of variation	df	Sum of Squares	Mean square	F
Effect of background knowledge on recall	3	244.85	81.618	14.885 *
Residual	196	1074.7	5.483	
Total	199	1319.6		

* $p < .001$

6.2.5 ITEM ANALYSIS

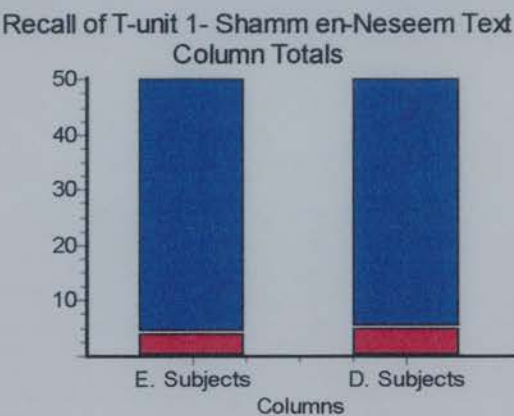
In the following diagrams, the blue colour indicates the percentage of subjects who successfully recalled each T-unit while the red colour indicates percentage of those who failed to recall such unit.

6.2.5.1 T-UNIT ANALYSIS OF THE EGYPTIAN RELATED TEXT

T unit 1

Forty six Egyptian subjects and forty five Danish subjects recalled the first T-unit in the Shamm en-Neseem text. The results obtained from Fisher Exact Test are considered statistically not significant (p values are 1.0000 and 0.1595 respectively). This was expected for two reasons. First, the Shamm en-Neseem text is related to the Egyptian subjects' cultural background and accordingly it was expected to be recalled by Egyptian subjects. Second it is the first sentence in the paragraph which was assumed to be remembered and recalled by many subjects in both groups.

Figure 6
Comparison between Danish and Egyptian subjects' scores of T unit 1 of Shamm en-Nessem text
Fisher's exact Test



E : Egyptian
D : Danish

T units five, six and seven

Comparing the performance of the two groups, we can conclude that more Egyptian subjects were able to recall the fifth T unit in the Egyptian related text than the Danish subjects (18 Egyptian subjects/3 Danish subjects). The p. value was 0.0004 (considered extremely significant). In addition, more Egyptian subjects recalled T units 6&7 in the same text than the Danish subjects. The p. value for T unit 6 was 0.0125 (considered significant) and p. value for T unit 7 was 0.0563 (considered not quite significant) These T units highlight the importance of lettuce and the role it played in the spring festival in ancient and modern Egypt. This is a culturally based notion that Egyptian subjects hold the schema for and accordingly were able to remember it more than the Danish subjects. These results support hypothesis 1 in this experiment.

Figure 7
Comparison between Egyptian and Danish subjects' recall of T unit 5 of
Shamm en-Neseem text

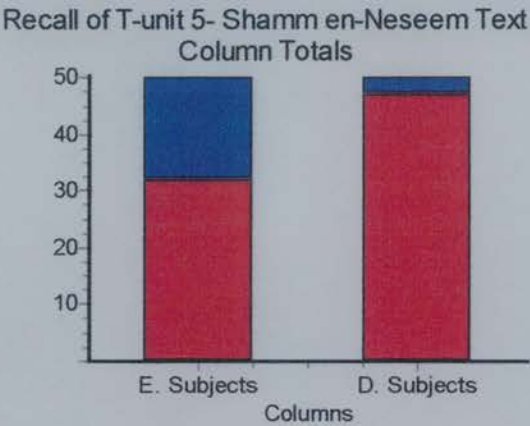


Figure 8
Recall of T-unit 6-Shamm en-Neseem text by both groups

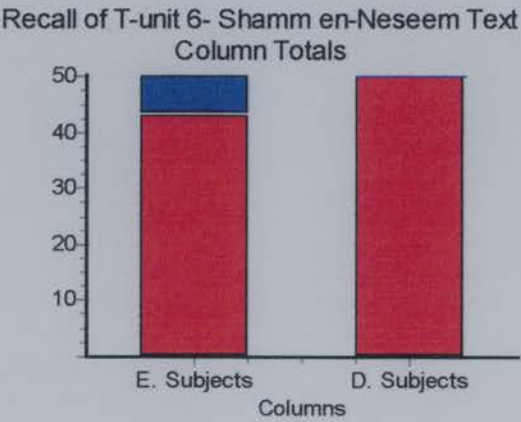
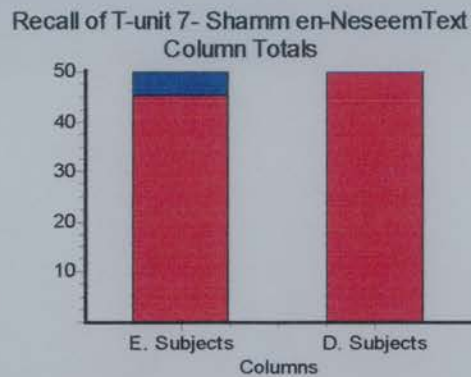


Figure 9
Recall of T unit 7 of Shamm en-Neseem text by both groups
Fisher's Exact Test



T-units 8 and 10

Similarly, more Egyptian subjects recalled T units 8&10 in the Shamm en-Neseem text than the Danish ones. The p. value for the eighth T unit was 0.0001 (considered extremely significant) while the p. value for the tenth T unit was 0.0035 (considered very significant). These two units focus on Egyptians' belief of the great healing power of onion both in ancient and modern times, a notion that Egyptian subjects definitely possess the schema for that enables them to recall it better than the Danish subjects. But surprisingly enough more Danish subjects recalled T unit 10 than Egyptian subjects. Maybe the Egyptian subjects considered it a detail and not as important as T unit 8 which is one of the main idea units in that text. This supports hypothesis 1 in this experiment.

Figure 10
Recall of T-unit 8 of the Shamm en-Neseem text by both groups

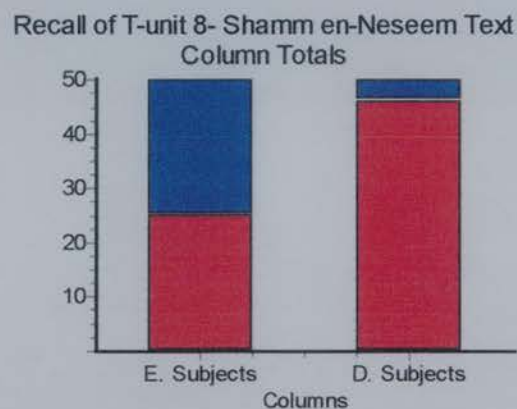
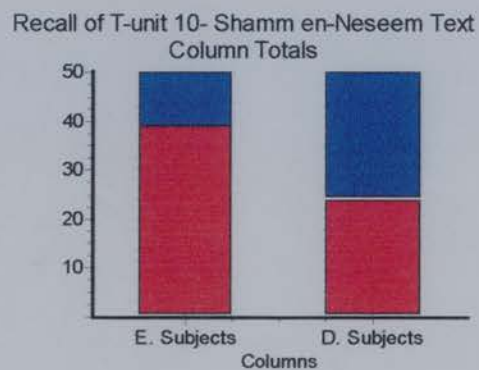


Figure 11

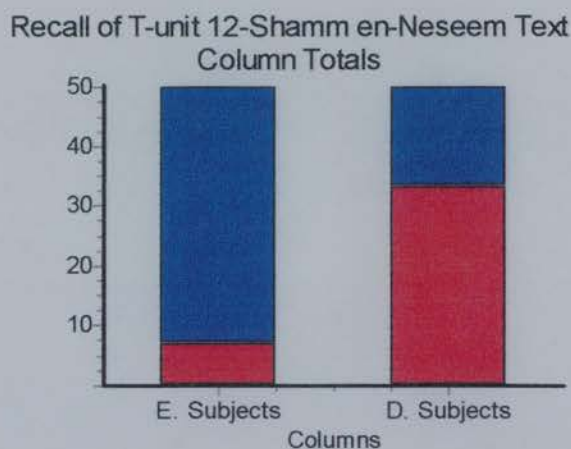


T-unit 12

Results from the data also indicated that T unit 12 was recalled by more Egyptian subjects (86% of the Egyptian group) than the Danish subjects (34% of the Danish subjects). The p. value was <0.0001 (considered extremely significant). Again, this T unit is centered around the ancient Egyptian legend which describes how on certain days, when people were fasting, they sacrificed fish to the gods. They then

salted the fish, to eat it later after the fast was finished. It was obvious that the Egyptian subjects have the appropriate schema for this notion since it is one of the main items on Shamm en-Neseem's menu. Egyptian subjects use their background knowledge to activate the existing schema. This notion was new to the Danish subjects who did not obtain the schema that helps them to understand and later recall this idea unit. These results support hypothesis 1.

Figure 12
Recall of T-unit 12 by both groups of subjects



T unit 15

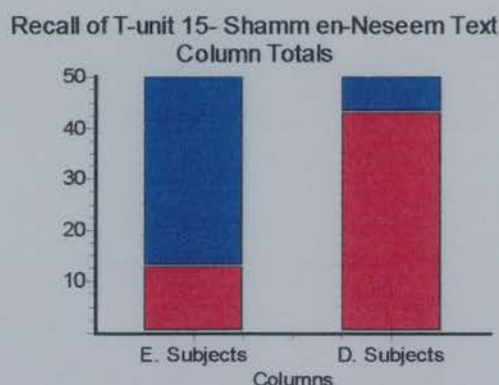
This T unit explains how the custom of coloring and exchanging eggs as a token of rebirth of nature is still carried out on the Shamm en-neseem feast. It was predicted that the Egyptian subjects will better recall this T unit than the Danish since they have that schema for it. The results from Fisher's exact test showed that 74% of the Egyptian group recalled it while only 14% of the Danish group did. The p. values was 0.0001 (considered extremely significant).

It was surprising that the Danish subjects failed to recall this particular T-unit which exists in Easter celebrations in Denmark. It is also worth noting that Muslim Egyptian subjects were able to recall it even if it does not exist in their religious practices. They relied on the cultural aspect of the celebration

that all Egyptians inherited from the Pharaohs. It is expected that Copts (Christians of Egypt) will recall it better since they belong to both the Egyptian society (which celebrates Shamm en-Nessem) and the religious Coptic community (which celebrates Easter).

The results support hypothesis 1 which indicates that the background knowledge of the learner will facilitate his/her reading comprehension and recall skills.

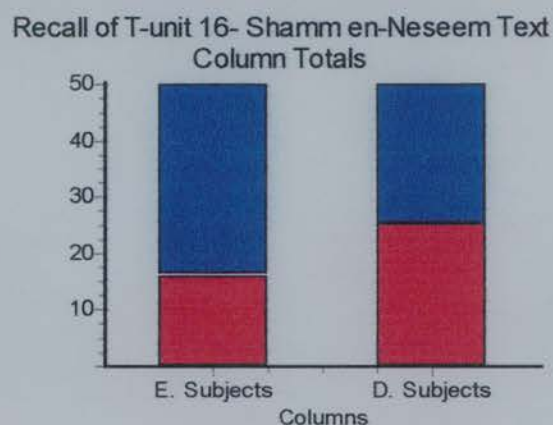
Figure 13
Comparison between recall scores of Danish and Egyptian subjects of T unit 15 of
Shamm en-Neseem text



T-unit 16

There was no statistical significance between the two groups in the recall process of T unit 16(p. value was 0.1033). Both groups were able to recall this T unit equally well. It seems that the nature of this T unit helped them recall it. It was remembered by many subjects (34 Egyptians and 25 Danish) because it expresses an idea that all subjects are familiar with; that is what people generally do during festivals (i.e. go to parks, wear new clothes, etc.)

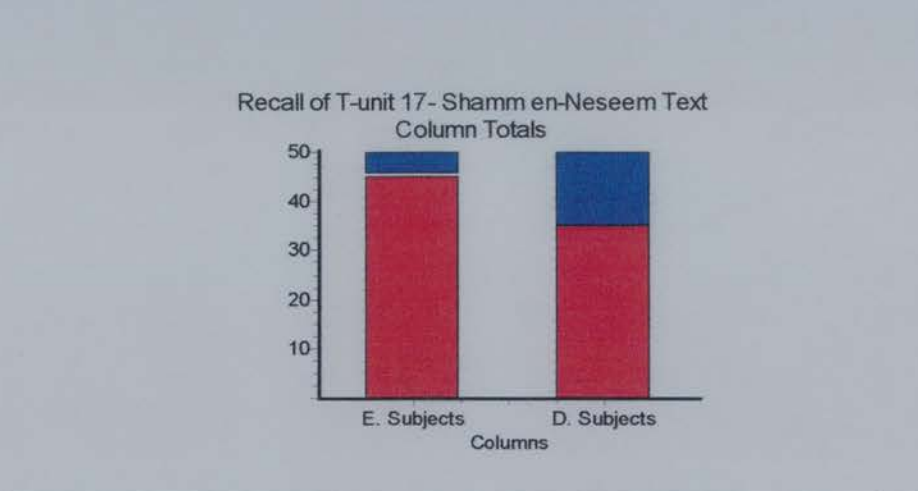
Figure 14
Comparison between Danish and Egyptian subjects' recall of T-unit 16 of
Shamm en-Neseem text



T unit 17

There was statistical significance between the two groups (p. value 0.0228). More Danish subjects recalled this T unit compared with the Egyptians. The reason that more Danish subjects recalled this T unit could be due to the fact that the information presented is novel to them. Egyptian subjects were reluctant to mention that they don't change their winter costumes before that day simply because they are familiar with this tradition and assume that people should automatically expect it when talking about Shamm en-Nessem. In other words, they probably thought it was not a major idea to be recalled.

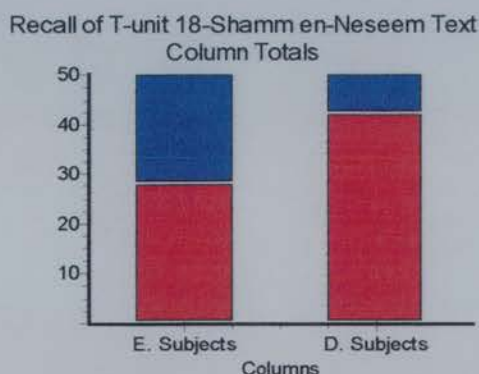
Figure 15
Comparison between Danish and Egyptian subjects' recall of T-unit 17 on
Shamm en-Neseem text



T unit 18

The statistical analysis showed that there was a significant difference between the performance of the two groups(p. value was 0.0041). It was expected that Egyptians will recall this T unit since they are familiar with the tradition. It was difficult for the Danes to remember this unit because it is centered around the ancient Egyptian legend of the " Shammamah", a tradition that even modern Egyptians still practice. This proves hypothesis 1.

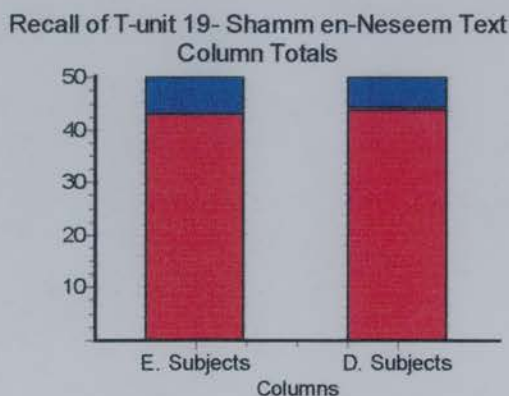
Figure 16
Recall of T-unit 18 by Egyptian and Danish subjects



T unit 19

An equal number of Danes and Egyptians recalled this T unit (6 Danes and 7 Egyptians). The p. values was 1.0000, considered not significant. This was due to the fact that subjects in both groups think this unit does not represent a main idea, it is peripheral information that is associated with the previous legend mentioned in T unit 18.

Figure 17
Mean scores of Danish and Egyptian subjects recall of T-unit 19 of Shamm en-Neseem text

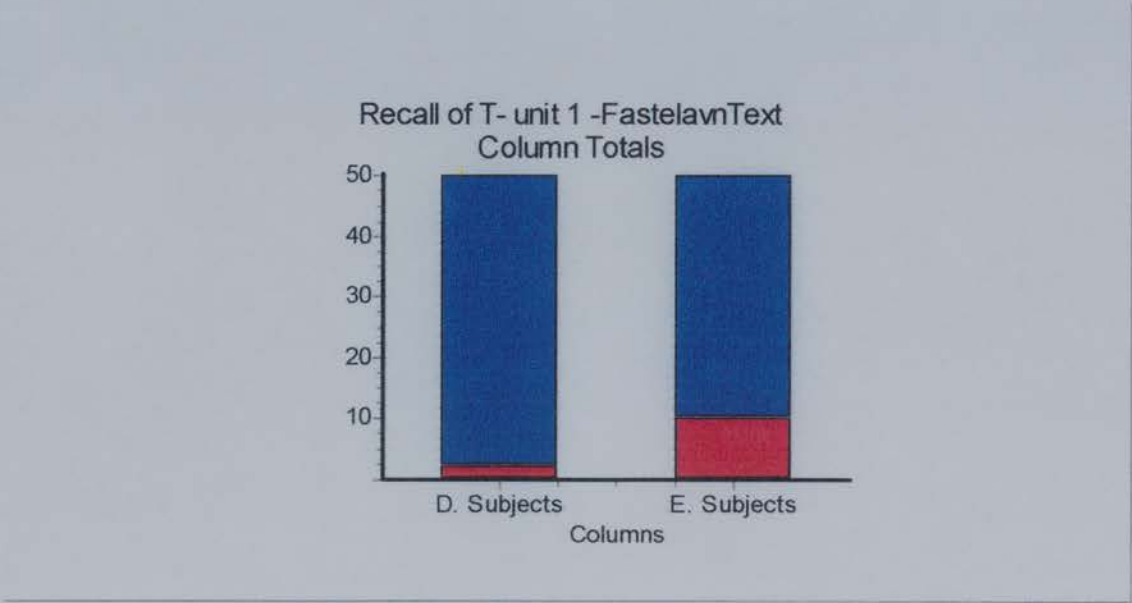


6.2.5.2 Danish Text (item analysis)

T unit 1

Fisher’s exact test was used to compare the mean scores of Danish and Egyptian subjects on the first T unit of the Danish text. The p. value was 0.0277, considered significant. It was surprising that more Egyptian subjects recalled this T unit than the Danish ones (48 vs. 43). Although it is the topic sentence and reflects the general theme of the passage which is the Fastelavn, a schema that Danish subjects are expected to obtain and accordingly recall. One justification could be that the structure of the passage does not help students in the recall process simply because it is considered the loosest kind of structures. Students were probably confused whether it is a major unit that has to be recalled separately or combined with another one that has a general theme as well, a tendency that subjects follow in processing such kind of texts (Meyer 1977). Another reason is that may be Egyptian subjects are strongly affected by the writing style in Arabic, their mother tongue, which emphasizes the notion of parallelism and repetition and considers them as good style. The collection of description texts include many items that can share the same ideas, so Egyptian subjects may have an advantage over Danish subjects since the Arabic style helps in recall of such texts. This can also be supported by the notion advocated by some linguists (Clarke, 1979) who claim that first language skills can be transferred and used when learning a second language.

Figure 18

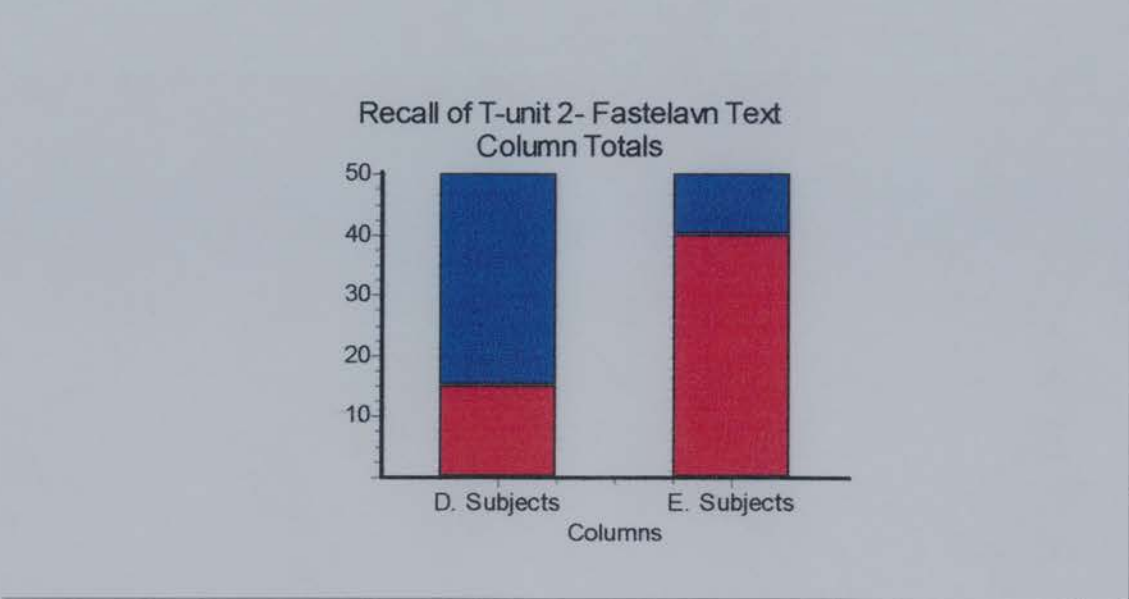


T unit 2

The results show that more Egyptian subjects recalled this T unit that refers to the importance of Fastelavnboller and shrovetide buns in both youthful games and customs as well as in festive adult menu. The p. value was < 0.0001, considered extremely significant.

This was surprising because the Egyptian students who do not have enough knowledge about the role of shrovetide buns in this festival are the ones who remembered it better. It was expected that the Danes will activate their existing schema and recall how the Danes celebrate the day. This could be attributed to the nature of the organization of text and reading ability of Egyptian subjects or memorization skills that Egyptian students have. It is worth noting that the schooling system in Egypt is a British one relying on a syllabus and a final exam. The system may encourage rote learning, and thus these subjects may be more likely to use rote learning processes

Figure 19



T units 7 and 8

The statistical analysis of the performance of both groups recalling these units show that there is a significant difference. The p. value for unit 7 was 0.0156, and the p. value for unit 8 was 0.0001. Obviously the Danish subjects recalled this T unit better than the Egyptian subjects because it describes a specific cultural practice that Danes are familiar with, that is children dress up in fancy costumes and fantastic masks and make neighborhood rounds, singing for buns and rattling collection boxes. On the other hand, Egyptian subjects are not familiar with this custom and therefore they were not able to recall it. Although it is a main idea unit, it seems that Egyptian subjects probably did not consider it as an important event in the festival. The difficulty of unit 8 is probably the song. Although the song was in English, Danish subjects were able to recall it better simply because they know when they sing it and what the words mean (no linguistic difficulty) and also it is a direct translation of the Danish one. Most of the Danish (41 subjects) recalled the whole song while the Egyptians subjects who were able to recall it just mentioned that the Danish children sing a song about buns. This confirms hypotheses 3 and 7 in this experiment.

Figure 20

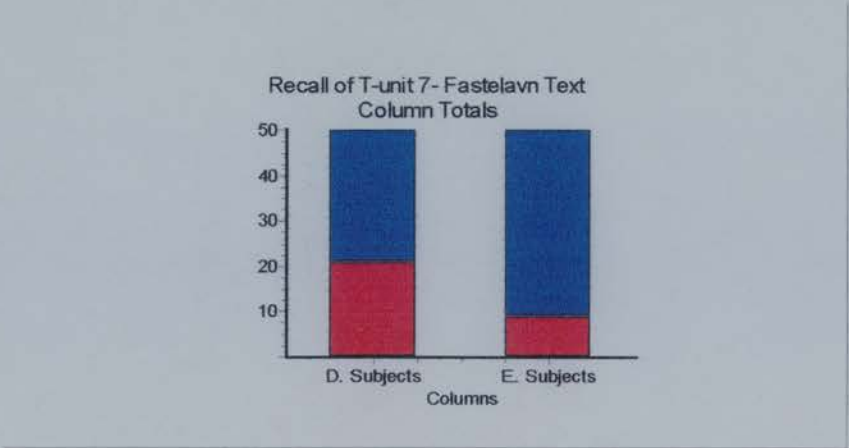
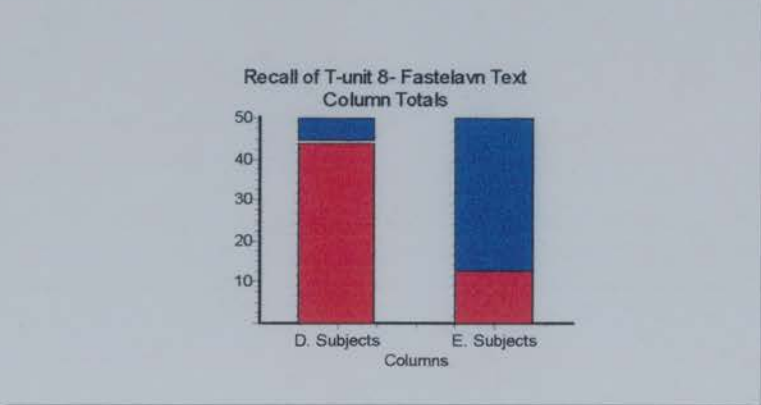


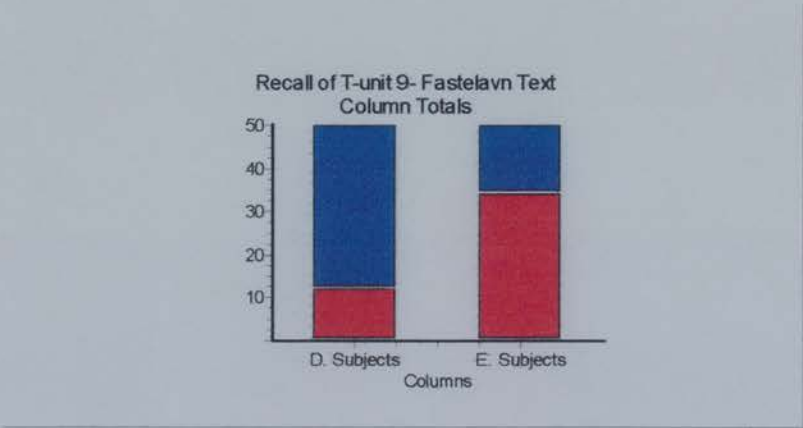
Figure 21



T unit 9

More Egyptian subjects recalled this t unit (38 vs. 16), the p. value was 0.0001, considered extremely significant. This T unit talks about parties in which children play different kinds of bun games. Danish subjects may have thought it was not important to recall such a unit as they assume that the reader will automatically know that this is the season for buns and bun games are part of the celebration. Egyptian subjects, on the contrary, might have thought that the information is very important and had to be recalled. For them the information is novel and therefore was easy to recall. So, it was a matter of how important the information is for both groups. In addition, Egyptian subjects activated their existing schema for parties which aided the recall of this T-unit.

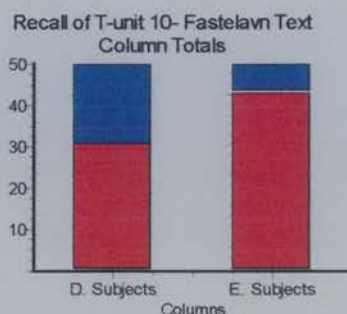
Figure 22



T unit 10

This T unit describes one of the games children play using buns. It was expected that more Danish subjects will recall this T unit since it is a game that most of them, if not all, practise since it is part of the Fastelavn festival. It was a surprise to see that the number of Egyptian subjects who recalled this unit is higher than the number of Danish subjects (19 vs. 7). The p. value was 0.0113, considered significant. It was noticeable that there were fewer subjects in both groups who recalled this unit. One explanation could be that subjects had some linguistic difficulty (vocabulary) which hindered them from fully understanding the description of the game (i.e. words like “stunt”, “suspend”, “chandelier”, “string”).

Figure 23



T units 13, 14, 15 and 16

The results obtained from Fisher's exact test show that there was a statistical significance between the recall of the two groups, the p. values were < 0.0001 , < 0.0009 , 0.0011 , 0.0004 respectively. Obviously, many Danish subjects recalled unit 13 (43 vs. 14) because it is one of the main ideas in the passage and a major tradition in the Fastelavn festival. Danish subjects hold the schema for this particular event and as a result was easy to recall. Their comments reflected such importance. One of the subjects mentioned in her discussion with the interviewer after the recall process that *Sla katten af Tonden*, "knocking the cat out of the barrel" is the only thing she cannot forget about Fastelavn. It is worth noting that 43 was the highest number of subjects to recall a unit in the Danish related passage (even higher than those who recalled the first T unit). It is obvious that the Danish subjects activated the existing schemata which helped them to recall the subsequent T-units better than the Egyptian subjects. They even made some elaboration such as "I was the cat king several times", "I used to decorate the barrel better than my classmates", "My father and I used to compete and try to smash the barrel, it was a matter of strength", etc. The Egyptian subjects, on the other hand, lack this schema and were able to recall briefly some of these units. They tend to generalize as they don't know the background knowledge of such tradition.

Figure 24

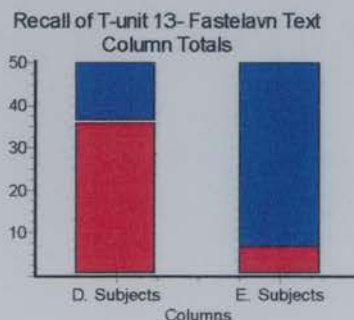


Figure 25

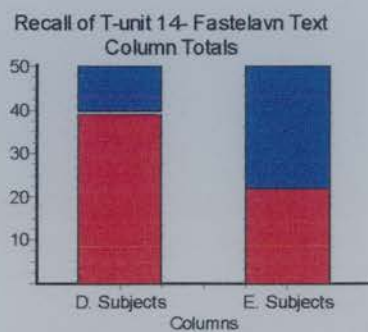


Figure 26

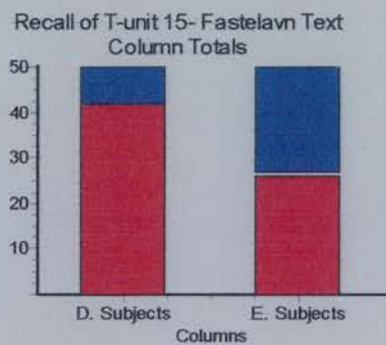
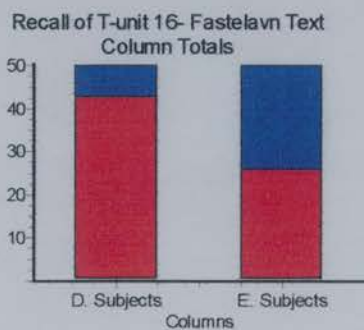


Figure 27



T unit 17-24

These T units describe the Fastelavn traditions in Danish seaport towns. There was no statistical differences between both groups related to their recall except for T unit 23. More Egyptian subjects recalled these T units compared to the Danish ones (23 vs. 6), the p. value was 0.0003. We can notice that Egyptian subjects tend to generalize. It was easy for them to recall any unit that describes a general idea that can be applicable to any festival such as T unit 23: ‘the musicians play and the men dance’. There was also a small number of subjects in each group who recalled these units (17,18,20,21,22,&24). Although it was expected that Danish subjects obtain the schema for this celebration, they failed to recall them . In my discussion with some of them, they said it was their first time to hear about it. Other students in the think-aloud experiment also shared the same opinion; they even said “ never heard of it.” So, belonging to the same culture does not always guarantee that the person obtains a schemata for a particular event or tradition.

Figure 28

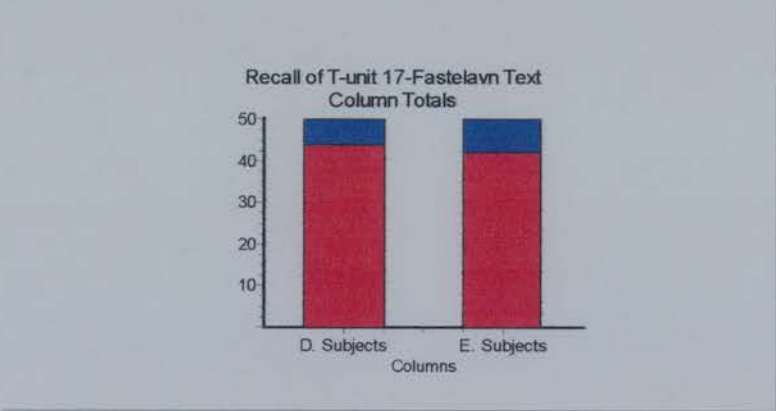


Figure 29

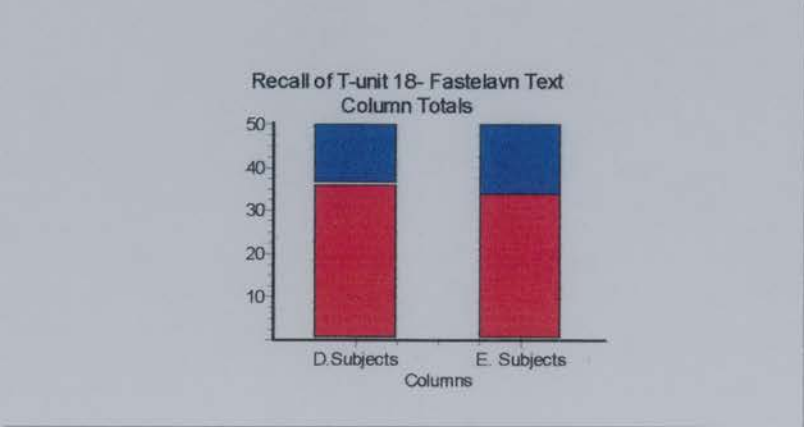


Figure 30

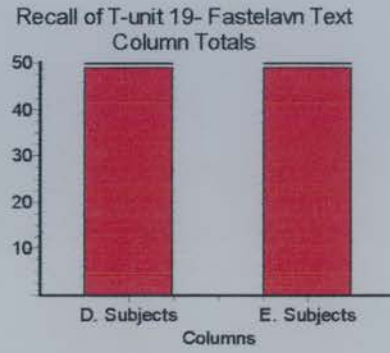


Figure 31

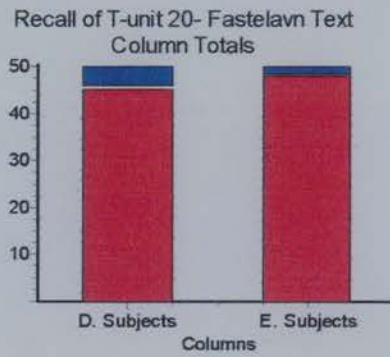


Figure 32

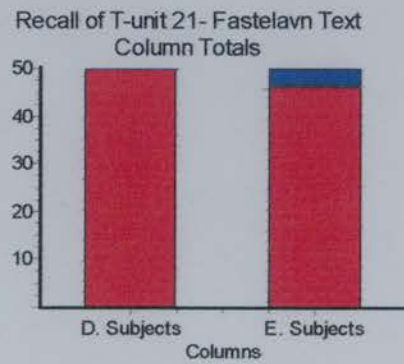


Figure 33

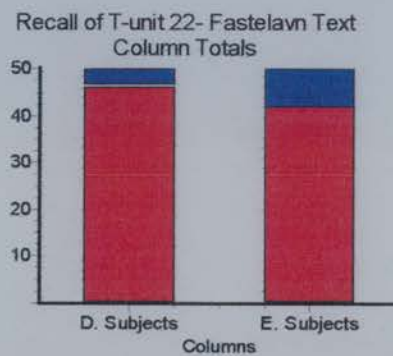


Figure 34

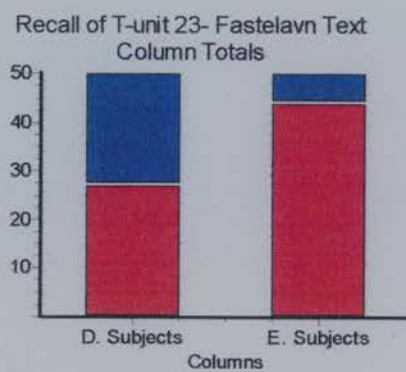
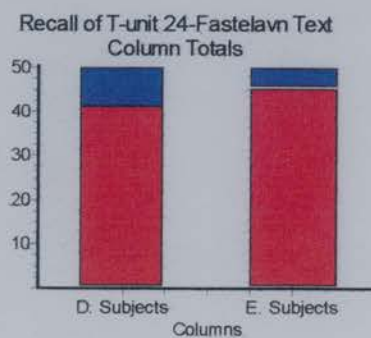


Figure 35



6.2.5.3 STUDENTS' PERFORMANCE ON THE GAP-FILLING TEST

The results obtained from the analysis of variance show that the Egyptian subjects scored better on the gap filling test of the Shamm en-Nessem text while the Danish subjects scored high on the Danish related text of Fastelavn. When comparing the performance of all subjects on both texts, we find that there is high level of statistical significance; $p < 0.000$. The difference between the mean scores of the Egyptian subjects on both texts was not as high as that of the Danish subjects. ($p < 0.0386$ & $p < 0.0011$ respectively). These findings support the second and fourth hypotheses of the study. The two hypotheses are based on the notion that the reader's cultural background knowledge facilitates comprehension. As a result, subjects were able to write the missing words that are culturally based.

Table 6
One way analysis of Variance of gap-filling test scores for Egyptian and Danish subjects

Source of variance	df	Sum of squares	Mean square
Scores of gap-filling test	3	126.44	42.148
	196	974.90	4.974
Residuals	199	1101.3	

Figure 36

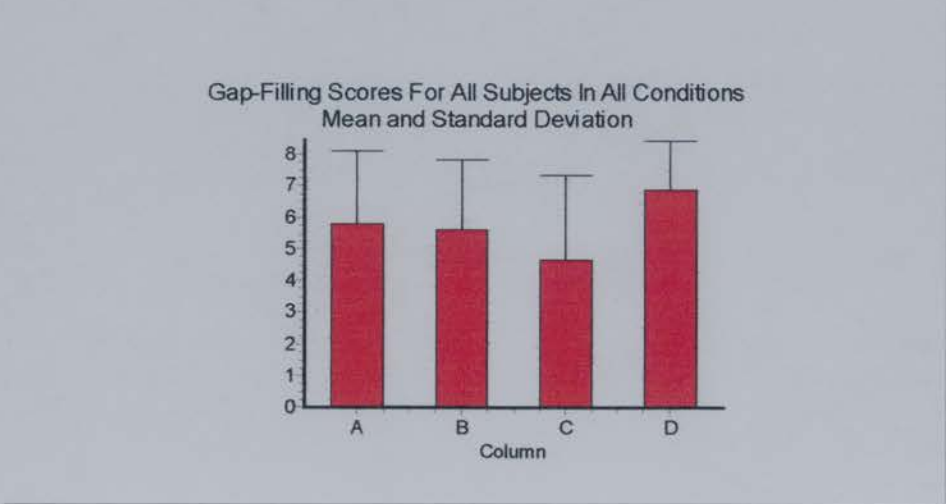


Figure 37

Gap-Filling Test Scores For Egyptian Subjects On Both Texts
Mean and Standard Deviation

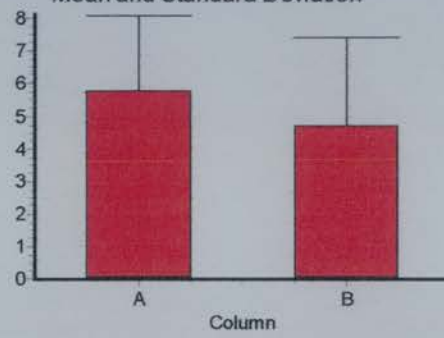
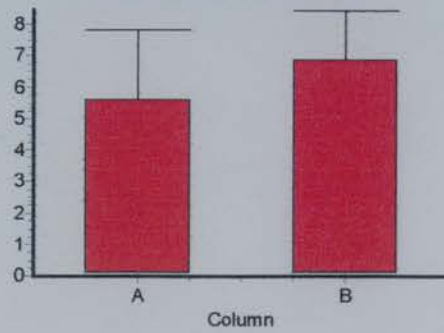


Figure 38

Gap-Filling Scores For Danish Subject On Both Texts
Mean and Standard Deviation



CHAPTER 7

DISCUSSION

7.1 GENERAL DISCUSSION

The results presented in the preceding chapter support the hypothesis that is based upon the schema theory, the background knowledge about the content area of a text has a facilitating effect on comprehension and recall of expository material. Students read, understand, and remember better texts that deal with their own familiar culture, i.e. materials for which they have well developed background knowledge than materials for which they lack the appropriate schemata. As was predicted in hypotheses one and three, Egyptian students recalled more T units from the Egyptian related text (Shamm en-Neseem) than they did from the Danish related text (Fastelavn). Also, the Danish students recalled more of the Danish related text than the Egyptian one. Although the difference between the Danish students' recall scores on the two texts was big enough to achieve statistical significance, there was no statistical difference between the recall scores of the Egyptian subjects on both texts.

Since this is a study of background knowledge effects on recall, the expectation is that any recall results extrapolated from the data should yield a classic difference between the two means of recall scores, that is, Egyptian students' quantitative recall on the Shamm en-Neseem text should be higher than what is reported in this study or their recall on the Fastelavn text should be lower than the actual score. This is to allow for a comfortable difference and hence confident results. However, this is not the trend presented here. In addition, the big difference between the mean scores of both groups on the unfamiliar text was surprising, and therefore worth examining.

Several explanations may be offered. First, there may be other factors than familiarity which account for the better recall of the Fastelavn text by Egyptians students. For instance, it may be a novelty effect (Carrell, 1983). It would appear that for the Egyptian group, the novel text (Fastelavn festival) was memorable, possibly because of its novel character. It is possible that the Egyptian students did not risk activating their prior knowledge for fear it may be inappropriate; instead, they made sure that any idea they were inclined to recall was indeed from the text and not from their prior knowledge. Although the Egyptian subjects' performance on the familiar text was slightly higher than their performance on the unfamiliar text, still the amount of recall was not as expected (only 24% of subjects scored over 50% of the total number of T units in Shamm en-Nessen text, see table 1-4 for more information). One possibility is that in the familiar text (Shamm en-Neseem) the Egyptian readers were not sure whether an idea they

were inclined to recall was really in the text or was in their prior knowledge of the content area and accordingly they may have refrained from writing down that idea in their recall.

Second, students' failure to use their background knowledge may be due to language problems. It seems that Danish students gave much attention to the language of the unfamiliar passage which resulted in poor recall scores, much lower than the Egyptian scores on the Fastelavn text. It may be, as Carrell (1983) suggests, that nonnative speakers are linguistically bound; they tend to attend to bottom-up processing when reading a text, that is, process the text at the word and sentence level. They are unable to approach the reading material by using the background information and top-level organizational features; that is top-down processing. This could also be applicable to all conditions of recall since both groups did not recall as much as they were expected to particularly for the familiar texts.

Third, being unable to recall most of the T-units of the familiar texts and obviously less of the unfamiliar texts (highest number of T units recalled was 14 for Danish students and 13 for Egyptian subjects), could be attributed to the inability of students in both groups to write what they recalled rather than their inability to recall what they read. These nonnative speakers may suffer from lack of appropriate vocabulary, ineffective use of connectives, and other writing problems. It is not clear from the research method (recall technique) how this happens since the recall protocols are scored for the presence or absence of each T unit. Other research instruments should be added to answer this question. In addition, subjects in both groups reported that foreign and unusual names that represent certain cultural aspects of the festivals they read about caused some kind of difficulty during both reading and recall. An addendum to this study, the questionnaire generally supplied more in-depth information about the subjects' perceptions and opinions of the texts. More specifically, the questionnaire inquired into the level of language and culture difficulty of the texts as well as their organization. The information obtained from section two of the questionnaire, revealed that words such as "Shamm en-Neseem", "Shemou", "Min", "Shammamah", "Feseekh" in the Egyptian related text and "Fastelavn", "Fastelavnboller", "Sla Katten af Tonden" in the Danish related text have caused students to stop and think of meanings and activities associated with them. In her response to the question on which culture component affects her reading and recall, one of the Danish students wrote 'It was so hard to remember what these words mean and which aspect of the celebration they are attached to. I spent so much time in remembering the spelling of these words and obviously did not know how to describe the events in my own words; I completely forgot.' Another Egyptian student commented: 'Generally, it was the unfamiliar culture that caused difficulty but mainly the strange words that bothered me a lot. When I did not remember one of these names and what they symbolize, I stopped. Although I was aware that these words are perhaps explained in the text, I was not able to recall many ideas.'

It is worth noting that some of the Egyptian students confuse foreign words and names with vocabulary that describe unfamiliar specific events. In conversation with students, they mentioned that they did not understand (and of course recall) phrases such as "Lenten birches" and "Easter smacks".

Possibly these comments are based on students' religious background, since the majority of subjects in the Egyptian group are of Muslim background. They probably could not understand the use of Lenten birches and what they represent in this festival and as a result, they failed to recall this idea and its supporting details.

It was also surprising that students in both groups indicated the difficulty of these foreign, unfamiliar phrases despite their clear position in the texts. These words and phrases are written between converted commas in both texts. It is claimed that new vocabulary and concepts are easy to spot, recognize and then recall if they are identified by certain punctuation marks such as paragraph indentation, quotation marks, inverted commas, brackets and parenthesis.

Fourth, the difference in performance within and between the two groups may be explained in the light of their educational background and nature of their EFL courses. The literature of reading comprehension has provided evidence that differences in reading abilities of ESL/EFL students may be attributed to the social context of literacy use in students' first languages (Grabe, 1991). The first thing to be considered is the extent of the literacy skills students have in their first language. Another issue is the question of whether or not students read equally well in their first languages. Let me give a brief description of the Danish and Egyptian English language programs which may reflect the immediate teaching goals as well as give insight into the broad and general philosophy of education in both countries. Then, an explanation will be provided in relation to the performance of both groups in this experiment.

In the Danish education system, the obligatory level exam is taken by 18 year-old students after two years of teaching with 4x45 minute-periods of teaching per week. It is supplemented by an oral examination, in which the candidates read a passage aloud from a book they studied, talk about it, and then translate an unprepared half a page of English into Danish. Each examination (oral and written) has its own grade.

The high-level "sproglig" exams, taken by 19 year old students in their third last year are essentially comparable with the obligatory level papers. They do, however, involve a written paper with a longer text and a longer translation from Danish into English and they take an hour longer. The corresponding oral exam takes a bit longer, too, and the passage they have to read and the unseen passage they have to translate are longer (3/4 of a page). This high level examination is taken after an extra year of study with 5x45 minute-periods of teaching a week, and the texts which they are able to be examined in orally represent a larger quantity of pages studied.

The intermediate level (or pseudo high level) exam for (19-year-old) mathematicians is taken after-in all- one year of 3, one year of 4, and one year of 5x45 minute-periods of teaching a week. The so-called mathematicians-or maths, and sciences students- do not have a written exam after their second year, only an oral one, of the kind described above under the obligatory level.

The examination papers are graded by two teachers from other colleges who don't know the students. They take into account syntactical, morphological, graphological and orthographical correctness,

lexical scope, variety and precision-especially the ability to handle a Latinate vocabulary in expressing abstract ideas-as well as idiomatic usage, together with the student's apparent level of understanding of the text, including the student's ability to summarize correctly, concisely and relevantly, the student's ability to analyse the thematic relevance of the presentation of the people and events and settings and of the title of the text. Also they evaluate the ability to the student to argue logically and with sufficient evidence for his/her own opinion about the theme or themes of the text. All these things are taken together to produce a single grade-which is an object for negotiation between the two teachers after they have read the paper concerned. Thus, it would be fair to conclude that comprehension of the text, as such, is of relatively minor importance in these written exams in comparison with the ability to produce authentic English language.

In oral examinations, the student's ability to read aloud is least important-the ability of the student to understand the questions put to him/her by the examiner is more important- and the student's ability to demonstrate some comprehension of the text prepared for the exam (a play, novel, short story or newspaper article which has been studied intensively in class during the year or two before the exam) is even more important: but of overriding importance again is the student's ability to produce (phonologically and grammatically) correct, fluent, idiomatic and eloquently authentic language. The fluent demonstration of a broad and self-critically discriminating active vocabulary is, in other words, once again more important than the student's ability to reproduce class notes about the content of the texts studied.

However unimportant in relation to the overall grading of the student's performance, both in the written and in the oral examination, the distinction is made between good and poor comprehenders. The latter might, for example, fail to understand a question put to them in the oral examination-or they might miss the point of the text they are to write about in the written examination. But, radical comprehension failure is so rare that-if and when it does occur-the student has probably already been deemed a failure in the examination because of their comparative inability to produce any significant amount of anything approaching authentic English-whatever its relevance to the text they are being examined in.

The relative unimportance of reading comprehension at this level of competence in English in Denmark is precisely that the Danish children have been subjected to much English on television and in the cinema-from an age much younger than that at which they could read or write their own language-that their comprehension competence is much less of a problem than their (lack of) ability to actively use their extensive passive vocabulary. Therefore, educators place much more emphasis on the latter skill rather on the former-even from the earliest classes in English, when the children are only 11 years old.

As we can see, although much emphasis has been given to the oral communicative skills, Danish students are trained in interaction with texts which in turn requires training in other comprehension skills and critical thinking. From the brief description presented above, one can possibly confirm that Danish students' proficiency level in English can ensure a better performance and a higher score on both texts

used in this experiment since, according to the European Union, Danish students' competence in English is second only to the Dutch students' in the whole of Europe. But this was not the case reported here. Danish students' comprehension was not affected by the familiarity aspect. As I explained earlier, the more novel the text, the more salient it is, and better recalled in short-term memory. Students in the Danish group scored poorly on the Egyptian related text compared with the Egyptian students' performance on the Fastelavn text, p. 0001.

One possible answer may be drawn from Carrell's (1983) explanation of how native and nonnative speakers approach texts. She suggests that while native speakers appear to have a good sense of how easy or difficult a text is for them to understand, ESL/EFL readers appear not to have this sense. They probably perceive a text as easy, but may not recall it well - a point that needs further investigation. Another justification could be that the overemphasis on oral communication and production of authentic language may have an effect on their ability to infer and recall expository material. Further practice on reading strategies and recall may improve their performance.

Although the Egyptian and Danish education systems share some general goals, they differ markedly in the way they approach and later achieve these goals. What we are interested in here are the goals of teaching reading comprehension. In Egypt, teaching reading is one part of a course that aims at developing the four language skills (listening, speaking, reading and writing). In the English language program, testing must assess and reward all four skills in an integrated way and examinations must be adjusted to evaluate the successful acquisition of the real-life performance objectives that are set by the Ministry of Education ². The following goals are developed for the secondary stage reading course:

1. Understand simple instructions.
2. Comprehend student texts in detail.
3. Comprehend the gist of different texts, notices, letters.
4. Identify topic of connected prose (newspaper, magazine).
5. Extract and interpret data presented in non-linguistic form from a table, a text, a graph or a diagram.
6. Use dictionary effectively.
7. Follow narrative (set books and novels) with little difficulty.
8. Identify unfamiliar lexis from redundancy of text.

According to the Egyptian system, students have to take an achievement test after each year of studying with a 6x45minutes periods per week. An obligatory level examination is taken in the final (third) year of secondary stage. The examination is a written one and is based on the content of the material presented during the language class throughout the year.

² Ministry of Education General Directory for Secondary Education and Counselor's Office, Directives for General Secondary School Teachers, English Language, Egypt, 1998-1999, p. 2.

Although the objectives developed by the Egyptian English teachers could be effective and valuable in a reading program, they do not serve the purpose they are set for. The lack of teacher training, the number of students in classrooms, the choice of reading material, the purpose of reading, the ineffective reading strategies used and the reading assessment tools are among the reasons that do not make such objectives work as planned.

In brief, the Egyptian schooling system relies mainly on a syllabus and final examinations. Teaching is viewed as a teacher-controlled and directed process. In the language program, secondary school students are trained to master the content of reading material and are later asked to reproduce the information in the same form as it was presented to them by their teacher. Vocabulary lists, grammatical analysis, and translation still receive much attention from both students and teachers. One of the main unseen goals for the English language program in general and the reading course in particular is to prepare students for the final examination. It will be odd if the teacher tries to help his students interact with the reading material because students want to focus on how they can perform in the final examination rather than develop the necessary reading skills. This situation is best expressed by an Egyptian teacher who says³: "When I present a reading text to the class, the students expect me to go through it word by word and explain every point of vocabulary or grammar. They would be uncomfortable if I left it for them to work it out on their own or ask them just to try to understand the main ideas."

The basic point is that the Egyptian educational system encourages rote learning and as a result students use rote learning processes when they encounter reading material. So, being trained to memorize resulted in better recall on the unfamiliar text "Fastelavn" compared to the Danish subjects' performance on the Shamm en-Neseem text. So, the ability to memorize the text by rote was perhaps an advantage that Egyptian students had over Danish students.

Finally, the reason why both Danish and Egyptian subjects did not recall much of the familiar and unfamiliar texts could be due to the effect of text type on recall. As has been established in chapter 3, there are five basic types of expository prose that have a specific kind of impact on reading comprehension. These are: collection, description, causation, problem/solution, and comparison (Meyer 1979). The collection and the description types can be combined together to form a sixth type-collection of descriptions. This is done when a number or collection of attributes, specifications, or settings are given about a topic. The collection, description and the collection of descriptions are the least tightly organized discourse types while the comparison, causation and problem/ solution are considered well organized types of discourse. The collection of descriptions type was the type used in this study.

The results presented in chapter 6 show that subjects were unable to recall many T-units from their culture related text and also failed to recall a reasonable amount of the text on the far distant culture. This could be taken as an evidence to claim that the structure of the Fastelavn and Shamm en-Neseem texts is the

³ Reflective teaching in second language classrooms, Jack C. Richards & Charles Lockhart, Cambridge University Press, 1994, p. 108.

direct cause of shortage of recall. It appears that the organization of the texts did not help students to decide on what is important information and what is peripheral. Of course there may be reasons other than the text organization as I have discussed in the previous section. But in order to strongly confirm this claim, other texts with different organizational patterns and other research tools should be used in order to allow for a comparison and then confirmation of the text type effect on recall. If the assumption that the Fastelavn and the Shamm en-Neseem texts are poorly structured and that their organization had an effect on students' recall, two pedagogical decisions have to be made. One is to think of reading strategies that help students understand and recall such kind of texts and the other is restructure the texts into more organized patterns to ensure comprehension and recall. Reconstruction of texts and reading strategies are discussed in detail in the pedagogical section of this study (chapter 9).

7.2 ITEM ANALYSIS

It was hypothesized that T units that are closely related to cultural aspects of the text will be best recalled by those who share the culture.

7.2.1 SHAMM EN-NESEEM TEXT

The results of the T-unit analysis show that most subjects in both groups were able to remember the first T unit in the Shamm en-Neseem text. This is because it is the first sentence in the passage which makes it more memorable than other T units. According to Taylor and Taylor (1983):

'The beginning of a paragraph is easy to spot, as it starts with an identification or is separated from other paragraphs by an extra space. The topic sentence is memorable, if it is explicit, prominently placed at the beginning and well supported by all the sentences in the paragraph. The topic is the most useful information to keep alive in working memory because it is needed to comprehend the other information in the paragraph, and ultimately, it is used in summing up the entire passage. The topic sentence can serve as a cue for retrieving the other information in the paragraph.' (p. 328)

Pfafflin (1969) also indicated that readers can often recognize a topic sentence even when the sentence in the paragraph is scrambled. The recall scores of both groups on the first T-unit were high as expected and also many Egyptian students were able to recall this T unit.

The T units which are centered around the cultural aspects of the Shamm en-Nessem festival were best recollected by Egyptian subjects (see figures 7-16 in chapter 6). The events and activities that are culturally based and were expected to cause recall problems to students who do not belong to this culture are :

- the use of lettuce and its legend
- the ancient Egyptians' belief of the healing power of onion
- the importance of eggs in the Festival

- the salted fish in Shamm en-Nessem menu
- the legend of the Shammamah

The results obtained from Fisher's Exact Test show that there was statistical significance between the mean scores of Danish and Egyptian students' performance of certain T units that describe the above mentioned ideas. For example, the difference between the two means of recall of T units 5,8,12,15 was considered "extremely significant", T unit 18 "very significant", and T units 6 "significant". These T units are closely associated the ideas mentioned above and obviously represent cultural traditions that Egyptian subjects are familiar with. Based on the schema theory, the Egyptian students hold the schema for such events and therefore were able to activate and use it appropriately in understanding and then recalling them. There were cases when the Danish subjects scored higher than Egyptians on some of these, as was the case in T unit 10. This T unit indicates that the Egyptian people still believe in the healing power of onions, and that Egyptian subjects might have felt that it is a specific detail that didn't need to be written. Also, it could be as I argued before that the loose structure of the Shamm en-Neseem text might have a direct effect on the decision made by the Egyptian subjects.

Although it was hypothesized that T units that bear cultural meaning will be recalled better by members of the same culture, there are certain customs, traditions and activities that these festivals share and accordingly could be easy to remember and recall by those who don't belong to that culture. Unit 10 represents this case. This unit talks about coloring and exchanging eggs during the Shamm en-Nessem festival, a schema that I believe Danish students should have since this tradition exists in the celebration of Easter. On the other hand, the Danish subjects had approximately the same score as Egyptian subjects on the recall of T unit 16 which describes how the Egyptians celebrate the day (i.e. dress nicely, go out to parks, sail on the Nile in a traditional felucca boat, etc.). This is a general schema that nearly everybody holds for the topic of festivals. Although subjects in this study were able to score higher on the T units that they are familiar with, it was not clear from data collected in the study how they process other information. Again, the basic issue to consider is the role the structure of the text plays in processing and recalling the information.

7.2.2 THE FASTELAVN TEXT

The first T unit was also recalled by more subjects in both groups. This was due to the fact that the topic sentence in the passage is more memorable than other sentences. The interesting thing to note here is that the number of Egyptian subjects who recalled this T unit was higher than the Danish. Although both groups were expected to remember this first T unit, it was striking to see that it was recalled better by the Egyptian students. The Fisher's Exact Test results shows a statistical significance between the two means of scores. One possible explanation is that their ability to memorize and recall is better than that of the Danish students since their educational system encourages them to process and learn texts by rote.

Another interesting finding of the item analysis is that Egyptian students were able to remember the second T unit of the Fastelavn text, an idea unit believed to be of special importance to Danish students (35 Egyptian subjects vs. 10 Danish students recalled it). This result was contrary to what was predicted.

The analysis of Danish and Egyptian students' performance on the seventh and eighth T units revealed that they were more memorable for Danish students simply because they represent a tradition that all Danish children experience during the Fastelavn feast. Going round the neighborhood in fancy dress costumes and masks singing and collecting money for the feast is considered unfamiliar, novel information to the Egyptian students. These results support hypothesis 7 stated in the first chapter of this thesis.

Another unexpected finding of the T unit analysis is the students' performance on T unit 9: 'at this season there are many parties at which children play different kinds of games'. Egyptian students were able to score higher than the Danes, $p.0.0001$. It appears that the Egyptian subjects considered it an important top-level idea located high in the content structure while the Danish subjects did not regard it as such.

T unit 10 was also recalled by more Egyptian subjects than Danish subjects. This was unexpected because the information was believed to exist in the Danish students' schematic background knowledge and should have been activated during the reading process. It is an important bun game that Danish students are familiar with. Unlike T unit 9, fewer students in both groups recalled this T unit. In order to be able to explain the reasons and justify the results, we need to look for other elements involved in both the reading and recall process as well as the research method. Maybe the free recall technique does not diagnose the problem effectively in this case.

The T units 13-16 explain a very important game in the Fastelavn festival called "knocking the cat out of the barrel".. There was a statistical significance between the mean score of Egyptian and Danish subjects. As discussed in chapter six, Danish subjects' existing schema for the 'Knocking the cat out of the barrel' game was activated appropriately during the process of reading, stored and later recalled. For example, the successful recall of T unit 13 (43 Danish subjects vs. 14 Egyptian subjects) was obviously due to the schema activation and use of background knowledge by Danish students.

The last two paragraphs of the Fastelavn text (T units 17-24) were not recalled by many subjects in both groups. The results obtained from the Fisher's exact test also show that there was no statistical significance between the mean scores of the two groups except for unit 23 (46% of the Egyptian group and 12% of the Danish one recalled this T unit). T unit 23 is a tradition that could be identified in any sort of festival like the Fastelavn, since people play music and dance in almost every festival. But, there are two interesting points to observe ; (1) Egyptian subjects scored higher on T units 20, 23, and 24 and scored equally on T unit 19 (2) very few Danish students recalled these T units (17-24). It was against the hypothesis which predicted that the Danish subjects will recall this part of the text better than the Egyptian

students. When asked to justify their poor performance, Danish students commented: 'never heard of this part of celebration before', 'do they really do so?', 'I am from a seaport, but I have not experienced this event', 'It must be a very very old tradition'. Once again it seems that being a member of one culture does not always guarantee full understanding of aspects of that culture.

7.2.3 CLOZE TEST

As has been presented in chapter six, both groups of subjects scored better on the gap-filling test of the culturally-related texts. These results supported the second and fourth hypotheses stated in chapter one. However, some subjects in both groups scored very low even on the test based on the familiar text. For example 26% of both the Egyptian and Danish subjects scored less than 50% on the gap-filling test of Shamm en-Neseem text. On the gap-filling test of the Fastelavn festival only 6% of the Danish subjects scored less than 50%. There were more Egyptian subjects who scored badly on the gap-filling test of the Danish festival of Fastelavn. Obviously, the overall performance of the Danish subjects on the gap-filling test is better than that of the Egyptians. Their scores were higher than the scores of the Egyptian subjects. On the Fastelavn gap-filling test, twenty one Danish subjects scored 80% versus eight Egyptian subjects while nearly equal number of subjects (9 Egyptians and 8 Danish) in both groups scored 80% on the gap-filling test of the Egyptian festival of Shamm en-Neseem.. In general, there is a trend that prior knowledge played a significant role in subjects' performance on the gap-filling test but the scores were not as high as expected.

7.2.4 The questionnaire

The information gathered from the questionnaire provided useful information about the subjects and their opinions on texts they read. The data revealed that all the Danish subjects felt that the Fastelavn text was culturally easy while 9 (about 14%) reported that they encountered some vocabulary difficulty. Similarly, the Egyptian subjects reported that they did not experience any problems with cultural aspects of Shamm en-Neseem text. Also, a number of Egyptian subjects (18%) claimed that the vocabulary in the text hindered them from fully understanding the text. While approximately half of the Egyptian subjects reported that they found great difficulty with the cultural components in the Fastelavn text, most of the Danish subjects reported that culturally based ideas did not cause comprehension problems when reading Sham en Nessem text. As has been discussed above, despite the Danish subjects' claim that the two texts were easy, they were not able to recall many T units as expected. In contrast, the Egyptian subjects recalled more T units even from the unfamiliar text than the Danish subjects. This supports Carrell's (1983) claim that nonnative speakers don't have a good sense of how easy or difficult a text is for them to understand.

The data obtained from the questionnaire also revealed that all the Danish subjects have travel experience while half of the Egyptians did not travel at all. Danish subjects reported that they traveled mainly in Europe and the United States of America and most of them have foreign friends in these countries. The Egyptian subjects traveled in the Middle East, Europe and the United States. Few of them reported that they have foreign friends. It was predicted that sophisticated/cosmopolitan subjects will score better than unsophisticated/less traveled subjects on the culturally-related items. In addition, having foreign friends may help subjects be acquainted with foreign culture and this can perhaps affect their learning. From the analysis of the written protocols and the information obtained from the questionnaire and the comments on the task, there was no evidence to confirm the above hypothesis. As I have indicated above many Danish and Egyptians subjects failed to recall at least half of the T units in both passages. Their written recall protocols were not as rich as predicted. They performed poorly regardless of their claim that the passages were easy, their acquaintance with other cultures, and experience with traveling. As has been discussed earlier in this chapter, there may be reasons other than these that affect their recall, i.e., text structure.

CHAPTER 8

THE THINK ALOUD EXPERIMENT

8.1 INTRODUCTION

This chapter represents the second phase of the current study. In this chapter, I intend to examine and compare the reading performance of six high school students from Egypt and Denmark. This involves examination of the influence of cultural background on the students' comprehension of the two expository texts (Shamm en-Neseem and Fastelavn festivals), the way they monitor their comprehension and the kind of strategies used to construct main ideas. In addition, their performance was generally compared to those who participated in the recall experiment. The comparison was made because the researcher used the think aloud method which was expected to have a different effect on the subjects' overall comprehension. Before further information is provided about this research study, I will review the use of think aloud in L1 and L2 reading comprehension research.

8.2 READING COMPREHENSION AND THE THINK ALOUD METHOD

As has been discussed in chapter two, reading is a hidden process that often goes unnoticed in the classroom. It is a complex process which involves several cognitive processes that can not be directly observed and thus it is a difficult task for psychologists to choose the appropriate method to examine it. The difficulty is due to the fact that all of the psychological processes important to comprehension are internal to the mind. Based on the assumption that good readers are aware of the cognitive activities that occur during reading and that they realize that reading is a problem-solving process, the thinking aloud technique was believed to be a useful research tool for studying the cognitive processes in reading comprehension. Although having readers think aloud while reading is a useful strategy to obtain information about the process of comprehension, we should be aware of the limitations and pitfalls of this method. The think aloud technique, like any other method, is useful to achieve some goals and not others.

The think aloud technique, developed by Newell and Simon (1972), has been used to study the reading process by a number of L1 and L2 researchers (Olson, Duffy, & Meck, 1984; Hosenfeld, 1977). Using the think aloud method in first and second language research surely helps us see whether L1 and L2 readers use similar processes and resources for solving the comprehension difficulties they perceive. Though much useful information has been collected when using think-alouds to study the reading of second language speakers, certain caution must be taken into account particularly when examining L2 readers' think-aloud protocols. Researchers must be aware that L2 readers' verbal reports may not be rich due to the lack of language proficiency or the demands of additional processes.

In the field of psychology, there has been much controversy about whether to consider verbal reports as data from which one can gain reliable results. Ericsson and Simon (1980) provide a clear discussion of the advantages and limits of the think out loud data in general including text comprehension. The researchers addressed the issue of the reliability of the think out loud data. They indicated that the criticism of verbal reports as data are based on wrong assumptions about the reasonable use of such data. They add that the data only provide indicators of real-time processes which are to be affirmed through the examination of other experimental procedures and measures. The data, like any other form of data collected in cognitive research, have their own limitations that should be kept in mind when using the think aloud method.

The work of Ericsson and Simon (1980) on verbal reports as data has clarified several issues about their use that are important to keep in mind when thinking about this data. One of the major tasks of think out loud (TOL) data is to make students report their immediate awareness rather than to report explanations of their behavior. Generally speaking, in any experiment that involves using the think aloud method, students should be required to report what they are thinking about right now, not what they remember thinking about some time ago. This is because we are interested in the immediate response, what is actually happening at the moment of speaking. In a think aloud task, it is also desirable to ask students to reflect on their experience; that is to talk about aspects of their immediate experience as much as they could. This all depends on what is available to them and whether or not they can talk about their experience. It is important to respect the students' ability to remember, explain and justify their own behavior because it is sometimes difficult to verbalize a particular process due to either the complexity of it or its unavailability to introspection.

Another important issue that we have to keep in mind when using data obtained from the think aloud tasks is that this data should not be taken as direct reflections of thought processes. They should be thought of as data which are correlated with thought processes. In fact, the data provide a sample of what the subject is thinking about during the task but they do not tell us exactly about the kind of strategies and representations used and the subject's source of knowledge. The underlying processes that we need to discover are not directly revealed; they must be inferred from the data. Thus, it is logical to say that the think aloud method is specialized for the study of the thinking. It is concerned with higher level processes in reading such as inferences, schema elaborations and other complex cognitions that occur as part of skilled reading. Unlike lower level processes (i.e., letter and word recognition), these processes are usually available to consciousness as the reader reads because the outputs of such processes are slow to rise, verbal, and samples of them are sufficient for the investigator to infer what must have transpired (Olson, Duffy, and Mack, 1984). When the think aloud method is used appropriately, it really does explicate the higher level processes in comprehension. It is probably one of the few techniques that are available in cognitive research for getting at this level of comprehension activity. It is one of the effective means that may throw light on individual differences in higher level cognitive processes. Moreover, the method is

also assumed to be a useful tool in studying readers of varying levels of skill or varying degrees of background knowledge. In this later case, caution should be taken since there might be some difficulty in deciding whether the performance of subjects using the TOL data is due to their reading skills or their ability to participate successfully in the TOL task.

It is true that any empirical technique will have successful and unsuccessful applications, and the think aloud method is no exception. So, in order for the think aloud technique to be useful and reliable, certain factors have to be considered. Olson et. al (1984) have come up with several factors that can affect how useful the TOL technique will be. These factors include the subjects' ability to engage in a TOL task, the types of instructions given, the type of material used, and the nature of the procedure and analysis of data. The researchers emphasize that subjects should be provided with clear and explicit instructions; they should know what they are supposed to do and what we want them to get out of the task at hand. This is an important point since we all know that different instructions will produce quite different outcomes. In addition, researchers who use this method should be sure that the instructions are appropriate to the texts being used because different text types may require different instruction. For example, in Olson et. al's study the instructions used for stories seemed inappropriate for the essays.

It is not enough to rely on clear instructions when conducting a think aloud experiment. We should consider the individual differences and the experience with the think aloud tasks. Obviously, not all subjects will talk equally informatively even if they are provided with clear instructions. Some subjects are not familiar with the think aloud technique and therefore they probably need training if our goal is to obtain reasonable quality data. There are individual differences among subjects when reading certain texts. These differences may be attributed to differences in strategies readers adopt when reading a particular text type (i.e., essay) or differences in the knowledge readers have about the text genre. The type of material used in a think aloud experiment plays a significant role and affects the performance of subjects and the outcomes of such experiments. The value of thinking aloud needs to be considered in conjunction with the nature of the text being read. In the discussion of the text types in chapter two, I referred to the problem reading comprehension researchers encounter in either finding or constructing appropriate texts. As has been presented in chapter two, some of the texts in comprehension research are short, boring, artificial, simplified and do not sometimes resemble naturally occurring texts. It is assumed that the richest protocols are elicited by texts that are natural and interesting. In Olson et. al's study, the researchers reported that the well-formed stories they used were real children's stories that motivated their subjects who were so interested to read to find out what happens. On the other hand, students were bored to read the essays and the resulting protocols were not as rich as the story ones. The results obtained from Loxterman, Beck, and McKeown's (1994: p. 364) study are relevant to the current discussion. The researchers claim that in order for the thinking aloud technique to have its greatest advantage, students need to be provided with a text that explicitly connects information and provides adequate explanations. The idea behind asking students to stop and talk about such a text is probably to give the opportunity to

reflect and think through information. The nature of the original texts may have an effect on the thinking and reflecting process. According to Loxterman et. al, it might have prevented their students from using the think aloud process to its fullest advantage. They add that the information in the text limited the extent of the thinking process that students were able to access. In other words, there may not have been enough comprehensible information available for the students upon which to reflect.

One of the major issues to be considered when using the think aloud method is the way data are analyzed and the nature of the procedure adopted. We should think of what is to be analyzed and the purpose of the analysis as there are different ways to analyze data as rich as those obtained from the think aloud tasks. The question of whether one gets successful and informative results depends on what one is actually looking for (Olson et. al., 1984). We sometimes analyze data to obtain general and useful information about the overall strategies used when reading a particular text genre while the analysis of data will differ if our purpose is to gain further insight into other specific aspects of comprehension processes that occur during reading. The type of procedure used will also have an effect on the results we obtain. Loxterman et. al (1994) reported that the procedure in their study was purposefully designed to be nondirective. It was a general attempt to engage students by simply asking them to talk about what came to mind after reading a segment of text. The important point the researchers raise is that there are other thinking aloud procedures that are more directive and thus potentially more powerful. These include activities in which students are asked to summarize a segment of a text or those in which we ask student a question that requires an inference that connects two text ideas. In brief, the think aloud is a useful technique to use even if we only ask students to engage with the target content.

Carol Hosenfeld was among other researchers who used the think aloud procedure to examine aspects of reading comprehension. She conducted a study (1977b) in which she attempted to find out what successful and unsuccessful students do to assign meaning to the printed texts. Subjects in her study were asked to perform a learning task and then think aloud as they are performing it. The results indicate that both successful and unsuccessful readers use different strategies to obtain meaning from printed text. While successful readers are context dependent and tend to keep the meaning of the text in mind, unsuccessful readers lose the meaning of sentences as soon as they decode them and always rely on glossaries to obtain the meaning of new words. These unsuccessful readers rarely skip unessential words and therefore they prefer to read word-by-word or in short phrases. They don't usually pay much attention to the use of context. In contrast, successful readers always read in broad phrases and skip unessential words.

Hosenfeld (1979) conducted another study in which the think aloud interviewing technique was used. One student was asked to read a passage and to think aloud while reading. The study aimed at examining (1) the behaviors that students engage in during the reading process and (2) the ability to acquire new reading behavior. The results suggest that a student who uses inefficient decoding techniques can acquire efficient ones. There was a big difference between the student's performance before and after

instruction. For example, before instruction she used to translate word by word and guess the meaning of new words without considering the context in which they occur. Also, she forgot the meaning of the sentences as soon as she decoded them. After receiving instruction, her strategies were more efficient. She made use of context to guess the meaning of new words, translated in broad phrases and remembered the meaning of sentences. Moreover, she used many information sources during the decoding process such as illustration, cognates, grammar, her knowledge of the world, etc.

In a recent study by Katherine Maria and Katheryn Hathaway (1993), the think aloud technique was used with teachers to develop awareness of reading strategies. A group of teachers were asked to think out loud while reading some professional articles. They talked about how they construct meaning as well as their thoughts before, during, and after reading each text. Teachers also viewed a videotape of one of their professors doing a think aloud while reading a difficult article. They were provided with copies of the article as an aid to understanding the think aloud. This activity is followed by a discussion of the professor's reading strategies and the differences between this reading situation and other reading situations that were taped. Giving the teachers the opportunity to think about their own processes, share these with others, and recognize the similarities and differences between each other's processes increases teachers' awareness and make them more open to change. The study also demonstrated that the videotape provides a model of the think aloud process that provides a model of openness to the teachers. They respond positively to this openness. Although there is a concern that teachers may imitate the strategies modeled in the videotape, the benefits of the model far outweigh its potential interference. The researchers conclude that the think aloud helps teachers in two ways: to recognize their own comprehension strategies as they model their thinking for students, and to value collaborative effort

From the above discussion, we can realize the importance of the think aloud method in cognitive research. Despite its limitation, it is still considered a good tool in understanding the learning process. Loxterman et. al.(1994: p. 364)) conclude that the effect from merely asking students to stop and reflect suggests that thinking aloud holds promise. The usefulness of the technique also led Ann Raimes (1985) to say that the think aloud was simply too good a tool not to be used. In her examination of ESL composing behaviors, Raimes reported that the think aloud data revealed so much more about the students than mere analysis of products or observation of the writing process. Although there can be no doubt that the task of composing aloud into a tape recorder is not at all the same as that of composing silently, and quite conceivably interferes with normal composing, the think aloud protocol analysis has still been felt by many investigators to be an effective and useful technique. Ericsson and Simon (1980) clearly indicated that they "found no evidence that thinking-aloud protocols change the course or the structure of the task being studied" (Ericsson and Simon 1980, as cited in Hayes and Flower 1983:216). Although the accounts they yield may be incomplete, think-aloud procedures are none the less acknowledged to be useful means of tracing cognitive processes, especially if the verbalization involves "direct articulation of information stored in a language (verbal) code" (Ericsson and Simon:227, as cited in Arndt, 1987:259). Susanne E.

Wade (1990) also reports that despite their limitations, think alouds have several advantages over other types of verbal reporting. She claims that they produce valuable initial hypotheses about readers' processing styles, which can be then tested in more natural reading situations. Her claims are based on Ericsson and Simon's (1980) assumptions that the think alouds involve highly specified tasks that produce more reliable results than hypothetical ones, and they lessen the problem of memory failure since the reporting is nearly concurrent with the processes being described.

8.3 COMPREHENSION MONITORING AND THE USE OF THINK ALOUD

The schema theory discussed in chapter four indicates that reading is an active process between reader and text and that both the bottom-up and the top-down processes interact together (Carrell, Devine, and Eskey, 1988; Grabe, 1991). It also emphasizes the influence of background knowledge on first and second language reading comprehension (Carrell and Eisterhold, 1983; Steffensen, Joag-dev, and Anderson, 1979). Reading comprehension as discussed in chapter three and four as well as the above section is considered a complex process that involves many cognitive activities and sub-components. Although researchers find it difficult to study these hidden cognitive processes, they at least know that readers actively control them and this control directly affects their ability to understand and to learn from text. The think aloud method helps get insight into such control processes. The control process is usually referred to as metacognition. According to Baker and Brown (1984), metacognitive knowledge may be defined as knowledge about cognition and the self-regulation of cognition. It involves thinking about what one is doing while reading; an ability that requires the individual to stand back and observe himself. It is always associated with and related to effective learning and competent performance in any area of problem solving. As we know, expert readers plan, predict outcomes, and monitor their performance more consistently than do poor readers.

Despite its great importance, the study of comprehension monitoring has been neglected in second language reading research. As has been pointed out in the previous chapters, second language readers encounter more unfamiliar language and cultural references while reading authentic material. As a result, they need to repair more gaps in their comprehension compared to native speakers. Comparison between L1 and L2 readers' performance is documented in the literature of reading comprehension. Although different, and sometimes confusing, results are obtained, these studies are of particular importance to comprehension monitoring since they throw light on the strategies readers adopt to understand natural texts. Research concerned with L1 reading has shown that proficient readers monitor their comprehension automatically. Since it is an ability that develops relatively late, adult readers are believed to have more control over the monitoring process than younger and less proficient readers. Proficient readers are more aware of how they control their reading and more able to verbalize this awareness. In addition, they appear to be more sensitive to inconsistencies in the text and respond to a

wider range of inconsistencies than poorer readers do. These skills are associated with reading proficiency. While L1 readers tend to use meaning-based cues to evaluate their understanding of the material being read, we find that L2 readers spend so much time on bottom-up processes and over-rely on word-level cues. This is supported by Carrell's study discussed below.

Second language reading research has recently been concerned with the issue of whether L2 readers read locally or globally and compare this with L1 readers. The general assumption obtained from such research is that L2 readers tend to read locally and often fail to recognize cohesive ties such as conjunctions and referents. An example of these studies is the one conducted by Carrell (1989). In her attempt to examine the metacognitive resources, Carrell found out that while ESL students (readers with greater L2 proficiency) prefer to read globally, EFL readers (students with less L2 familiarity) use a more localized process. This means that better L2 readers tend to use top-down processes similar to those used by proficient L1 comprehenders.

The question of whether the reading process is the same for all languages and whether L1 reading ability transfers to L2 reading was addressed by several researchers. Based on the psycholinguistic model developed by Goodman and Smith discussed in chapter three, Mark A. Clarke's (1979) study suggests that reading ability is heavily dependent on L2 language proficiency. He argues that although the psycholinguistic assumptions of universals may be justified, the role of language proficiency in L2 may be greater than what researchers used to think. As for him, there is no direct transfer of ability or strategies across languages and in order for the transfer to occur, students are required to become competent in the foreign language. So, the "short-circuit" in the proficient reader's system is caused by a limited control over the language.

As far as comprehension monitoring is concerned, there are still many issues to be investigated. Research has not provided us with clear evidence of how L2 readers monitor or evaluate their comprehension, what kind of processes they use to repair gaps in comprehension or which cues they attend to in their evaluation and regulation process. Moreover, we need to know whether or not L1 and L2 readers go through the same stages when monitoring their comprehension. A recent study by Ellen Block (1992) was designed to tackle some of these issues mainly to explore and compare the comprehension monitoring processes of first and second language readers of English as they read a passage of expository prose. More specifically, the study discussed the monitoring process with respect to two specific problems: one involving a search for a referent, the other, a vocabulary problem. The researcher used the think aloud technique because she believes that think-aloud protocols provide a chance to examine the comprehension-monitoring process in some depth. Block found that there is a regular process which operates similarly for native speakers of English and second language readers. However, she reported that the process operated more fully with respect to the referent problem than the lexical problem. Although L2 readers were found to have language-based/text-based problems, they managed to understand the text because they had the resources to solve the problems. In other words, these proficient ESL readers used

strategies similar to the proficient native speakers to solve the problems. It seems that strategic resources are more important for ESL readers than specific linguistic knowledge. Similar to Carrell's findings mentioned above, Block suggests that less proficient readers favor a local, word-level processing while proficient readers prefer a more global meaning-based one. In general, the reading process of L2 readers may be less automatic and lower than that of L1 readers of similar ability. What actually helps L2 readers overcome this problem is the adequate resources available for evaluation and regulation of reading. The differences in the way ESL readers and L1 readers monitor their comprehension is probably due to their reading proficiency than to the language background of readers.

8.4 MAIN IDEA CONSTRUCTION

The schema theoretic approach views reading as the active construction of meaning. As has been demonstrated in chapter four, the reader integrates new knowledge derived from text with his/her background knowledge in ways that make sense. In constructing meaning, proficient readers attempt to obtain as much information as they can for the text being read. Once they have enough information, they select one or several schemata that help them make sense of information they obtained. They depend mainly on meaning-based cues and other important lexical cues in the text. They also tend to evaluate how well their schema fits with new incoming information and if it does, they are able to make the right predictions of what will come next in the text they read. The schema does not sometimes account for incoming information and therefore it is either rejected or modified and the search for a more adequate schema starts. So, monitoring one's comprehension will eventually lead to effective reading. This monitoring and the self-regulation of cognition requires continuous evaluation of one's understanding of a text. It also requires readers to take correct actions when they encounter comprehension problems.

One of the major skills in the process of constructing meaning presented above is how to construct a main idea. It becomes a very difficult task particularly when the main idea of a text is not explicitly stated. In this case the reader tries to construct a statement to represent the main idea as it is difficult for him/her just to select it from the surrounding sentences. Van Dijk and Kintsch's (1983) model discussed in chapter three and Afflerbach's work (Johnston and Afflerbach, 1985; Afflerbach, 1990) suggest that main idea construction is very important to text comprehension. Although these researchers agree that main idea construction is crucial to comprehension, they differ in the way they handle the issue. According to van Dijk and Kintsch (1983), there are two types of processes that the reader goes through to understand a text: microprocesses and macroprocesses. They suggest that the macroprocess of constructing a main idea statement usually takes place automatically and therefore if the reader can not find the main idea in a text, he/she creates one through the macroprocess of construction. The study by Brown and Day (1983) confirms the suggestions made by van Dijk and Kintsch. In this study, the authors identified strategies for summarizing a text among which is a strategy called invention. The rule they develop for this strategy is:

if there is no topic sentence, then construct one. Again, this study describes main idea construction as an elemental, automated process. Van Dijk and Kintsch go further and suggest that comprehension processes that are not automatic, and hence demand cognitive resources, are of limited usefulness.

Johnson and Afflerbach (1985) hold a different opinion on how a main idea is constructed. They believe that main idea construction may be achieved through the use of one or more cognitive strategies, rather than automatically. Though not ignoring the role of automatic construction process, they identified four other strategies that are used to construct main idea statements. These strategies are: draft-and-revision, topic/comment, initial hypothesis, and listing. The rules developed for these strategies are presented in the following table:

Strategies used in main idea construction, and rules for their use

Strategy	Rule
Overall main idea construction	
Draft-and-revision strategy	If the main idea stated by the reader is judged to be satisfactory, the reader considers it a first draft and sets about revising it.
Topic/comment strategy	If upon completion of reading the text the reader is able only to state the topic, the reader does so, and then proceeds to qualify the topic with a comment.
Automatic construction	(No rule)
Other construction strategies	
Initial hypothesis strategy	If the reader feels a reasonably accurate initial hypothesis of the main idea can be generated, based on the title, first sentence, or a skim of the text, the reader does so, and then proceeds through the text, monitoring the accuracy of the hypothesis, and modifying it when appropriate.
Listing strategy	The reader searches for important or related words, concepts, or ideas, in text or memory, to be used in constructing a main idea.

Note. Strategies may overlap. Because automatic main idea construction bypasses working memory and is not described in think-aloud protocols, no rule could be developed.

The researchers reported that when reading difficult texts, expert readers tend to use mediated, nonautomatic comprehension strategies to construct main idea statements rather than constructing them automatically.

Afflerbach's (1990) recent study on the influence of prior knowledge on expert reader's main idea construction strategies was an extension of the earlier work done by Johnson and Afflerbach (1985). The results of this study confirms Johnson and Afflerbach's previous findings that main idea construction is not always automatic or elemental. Nonautomatic comprehension strategies are important particularly if they are the only option available to the reader. It also indicates that expert readers often construct the main idea automatically when they read texts about familiar topics. On the other hand, readers encounter severe problems when constructing a main idea statement for unfamiliar text and therefore need to use a cognitive strategy to overcome the difficulties. Afflerbach explained this by reporting that the lack of prior knowledge caused expert readers to depend on comprehension strategies which were not automatic. The use of these strategies took place before expert readers began constructing main idea statements. As a result these strategies used resources in the working memory, leaving fewer resources for tasks important to automatic main idea construction. The situation was different when these expert readers dealt with texts about familiar topics. In this case, they had access to well-developed schemata which they applied successfully to the task at hand. Afflerbach also reported that prior knowledge played a positive role in generating accurate initial hypotheses which in turn aided comprehension monitoring and probably freed additional cognitive resources for main idea construction. The overall automatic main idea construction for familiar texts definitely benefits from the automatic processes which occur at this level.

8.5 THE CURRENT STUDY

As stated in chapter one, this experiment is designed to examine the following hypotheses:

1. Egyptian students will recall more of the Egyptian related text than Danish students.
2. Danish students will recall more of the Danish related text than Egyptian students.
3. Egyptian native speakers will be able to make more accurate predictions relating to the Egyptian text than Danish native speakers will be able to make relating to the Danish text.
4. Danish native speakers will be able to make more accurate predictions relating to the Danish text than Egyptian native speakers will be able to make with reference to the Egyptian text.
5. Students' recall will be affected by the structure of the text. It is predicted that students' verbal reports will be shorter than expected and will lack quality T-units (i.e, main ideas vs. details).
6. Prior knowledge will affect main idea construction: readers who lack knowledge of the content domain will rely on other strategies rather than constructing the main idea automatically.

In this study, the six participants completed the think aloud task described below and the questionnaire followed by an interview with each subject. The interview aimed at obtaining additional information about the subjects' performance on the think aloud task and their opinions and justifications of the strategies they used for the prediction task, main idea construction and the overall comprehension of the texts. The researcher used a case study approach to get more insights into the nature of the processes involved in the above mentioned tasks.

8.6 THE SUBJECTS

The subjects who participated in this study were high school female students who study English as a foreign Language as part of the national curriculum in both Denmark and Egypt. Three of the subjects study at The Ers Catre high school (Gymnasium) in the Danish city of Aarhus while the other three study at al-Amal secondary school in Cairo, Egypt. All the subjects were second year students who were not involved in the previous task (free recall and gap-filling cloze test) and accordingly did not see the texts. Two of them were rated as good readers, two average, and two as poor comprehenders. This was important to guarantee a sample of subjects of varying reading abilities and thus have a wide range of strategies which enable the researcher to make useful comparisons without being biased against one particular level (i.e, poor readers) The teachers reported that their judgments were based on the students' scores on the national English language examinations prepared by the ministry of Education and relevant schools and their regular quizzes as well as teachers' observations of the students' performance on reading tasks conducted in the reading classes.

8.7 PROCEDURE

Students were given clear instructions of how the task will be conducted. The instructions were given both in English and the mother tongue (Arabic and Danish) to ensure that the subjects understood the objectives and the stages of the exercise. Subjects were asked to read the first paragraph of the text, covering the rest with a blank sheet. The subjects were asked to read at their normal speed and were informed that there was no time limit. In addition, they were not permitted to refer back to the text or write any notes.

Once they finished reading the first paragraph, teachers asked them to report what they understood in as much detail as they could. Teachers interfered from time to time providing hints and clues to enable students to remember the events and reflect more on what they had read. Students were then asked to report their expectations of what was coming next (in the second paragraph). This process goes on until they finish the whole text. The verbal data obtained from each subject was recorded on a tape and later transcribed and analyzed by the researcher. The recording took place in a room provided by the school and

two teachers (one from each school) conducted the interviews. Each student was asked to fill in the questionnaire after finishing the think-aloud task. The questionnaire is used to get more information about the subjects' background and their opinions and comments about the difficulties they encountered while reading the text.

8.8 TRANSCRIPTION OF THE THINK-ALOUDS

The way in which behavior can be symbolized within a transcript varies from one study to the other. Ochs (1979) states that the orthographic representation of utterances vary according to goals of the research undertaken. For example, children's utterances are commonly represented phonetically but when their pronunciation approaches adult norms other representations may be used. In the current study the researcher used the transcription system developed by Ochs (1979) which is based on Sacks, Schegloff, and Jefferson's (1974) transcription practices of the conversational analysis. According to Ochs, strictly standard orthography should be avoided and a modified one such as Sacks et. al's should be employed. She adds that a modified orthography captures roughly the way in which a lexical item is pronounced versus the way in which it is written. For example, modified orthography includes such items as gonna, whazat, yah see ?, lemme see it, and the like (Ochs, 1979: 61). This experiment only adapts Ochs' transcription system of verbal material focusing on specific information that serves the purpose of the study (see below). Nonverbal material was not marked. The following table will present each behavioral property to be represented in the transcript and the convention for representing each of the properties. All the utterances were written exactly in the same way as they were pronounced by the students. The transcription symbols for the verbal behavior used in this task are as follows:

What to mark	How to mark
1. Utterance boundary	/ placed at end of utterance
2. Pause length	(..) marks a short pause (....) marks a long pause
3. Intonation	? marks high rise (as in questions) ! marks exclamatory utterance . marks a low fall
4. Metatranscription marks	() unclear reading, no hearing achieved
5. Other marks	(laughter) (inaudible)

8.9 GENERAL OBSERVATION OF THE THINK-ALOUDS

The data collected from the six presentations show that the Egyptian and Danish subjects were able to reflect on the text that was culturally related. However, Egyptian subjects were able to reflect equally well on both texts and Danish subjects failed to recall some idea units even for the culturally related texts. All subjects reported that they felt relaxed talking about the familiar topic during the think aloud task while they encountered some difficulties when reading and talking about the unfamiliar topic. This was clearly evident in the amount of talk and the quality of ideas produced. When subjects read the familiar content, they were able to remember and talk more about the customs and traditions and the cultural aspects associated with the festival in as much detail as they could. However, there were situations where these students were hesitant and confused either during the reporting task or the prediction activity. There were different signs of such hesitation and confusion: long pauses, repetition of the same ideas, use of language fillers, use of phrases such as "I don't know", etc. They used these strategies when they read the unfamiliar content and even some segments of the familiar text. In general, prior knowledge and the think aloud technique aided their comprehension as predicted in hypotheses one and two. In the remaining part of this section, I will further discuss the subjects' performance on the tasks previously mentioned (i.e., reporting and prediction). The purpose of the discussion is to provide a general view of their performance on these tasks rather than discussing specific skills or sub-skills.

8.9.1 EGYPTIAN SUBJECTS' PERFORMANCE

Data showed that the Egyptian subjects (Marwa, Mariam, and Shayma) were successfully able to reflect on the Egyptian related text (Shamm en-Neseem festival). Not only did they recall the main ideas

but they also talked about the details and other aspects of the festival. The following excerpt from Shayma's interview indicates how successful she was in recalling the ideas presented in the first paragraph:

- T. That's it thank you./ now I (..) think you've read the first paragraph of the passage you have just taken/ (..) please tell me the main idea of whatever you remember about the first paragraph/
- S. Well (..) it speaks about ancient Egyptians and how they celebrated the coming of the spring (..) they call this festival Shemou./ and up till now this festival still exists (..) even though it's five thousand years old (..) under the name of Shamm en-Neseem or the smell of the breeze/ (..) and up till now it brings happiness and joy to the hearts and minds of our people (..) that's it./

Original text: The ancient Egyptian revered the coming of spring and called it Shemou, a term which exists today in modern Egypt in the name of Shamm en-Neseem (or the smelling of the breeze). The name has altered somewhat but, surprisingly enough, the festival has remained unchanged for more than five thousand years, still bringing awe and rejoicing to the minds and hearts of all people.

As we can see, her speech included all the ideas in the original text. Shayma and the other two Egyptian subjects did this consistently when reading the other segments of the text. To illustrate, let's examine Shayma's comments on the second paragraph of the Shamm en-Neseem text:

- T. Now we come to the second paragraph Shayma/ again tell us what you can remember about the second paragraph/
- S. Well it speaks about how Egyptians celebrate the coming of the month of April the month of harvest/ () well they pay their tribute to ah (..) Min the God of fertility they (..) take a bundle of lettuce to the (..) to (..) which is the plant of Min (..) in a ceremonial procession well they believe that lettuce contained a certain oil which was beneficial for fertility/ well (..) up till now Egyptians still (..) believe lettuce is still a form of celebrating this feast (..) and this proves to us that times haven't changed this ceremony or celebration/

Original text: The harvest month of Shemou (April) was welcomed in ancient Egypt by paying tribute to Min, the God of fertility. A bundle of lettuce, the plant of Min, was carried in the ceremonial procession. The ancient Egyptians believed that lettuce contained an oil beneficial for fertility. One look at modern Egyptians rejoicing at this same feast is enough to see that times have not changed. Lettuce still forms part of Shamm en-Nessem's feast.

Again, Shayma was able to recall all the ideas presented in the paragraph without any problems. In the interview, she added that she relied mainly on her knowledge from her history class and her personal experience as a member of the Egyptian society. Although Shayma, Marwa, and Mariam reported that they did not encounter any problems talking about this festival, their reports differed slightly especially when commenting on the last paragraph. Some details were missing but the overall recall was not affected. When reflecting on the text, Marwa and Shayma tried to report the information in a language similar to that of the text while Mariam explained the ideas in her own words. It was an attempt from Marwa and Shayma to remember all the activities and events but this should not be taken as a sign that they were linguistically bound. In fact, it was Mariam who had some problems with vocabulary as she expressed in the interview with the teacher. For example she did not quite understand the words 'cast' and 'sniffing' in the last paragraph and this as she said, hindered her from recalling some of the ideas in this paragraph. Let's compare Shayma and Mariam's comments on the last paragraph of the Shamm en-Neseem text:

Shayma's report:

Well ah (..) it speaks about a very remarkable aspect aah (..) in aah (..) how Egyptians celebrated the day/ ah (..) well all Egyptians would go out in the early morning to aah (..) smell the (..) spring breeze/ they would go out to the streets to the gardens or sit by the Nile in the early morning aah (..) dressing in their newest outfits/ aam (..) well up to now this er (..) Egyptians still do this up till now and they refuse to (..) cast aside their winter clothes until that day/ well there is a legend er (..) told by old (..) ancient Egyptians that aah (..) the Shammamah would go sniffing around all those who are sleeping and they would (..) curse er (..) those who hadn't bathed in the evening of their feast so children would bath before sleeping so that they wouldn't be cursed by that Shammamah that's it/

Mariam's report:

- S. Well it says how Egyptians celebrate/ (..) and they hand onions and they go out their homes (..) in the early hours of the day to smell the breeze (..) aam (..) they could go to the gardens Nile (..) the Nile wearing their newest spring outfits (..) outfits/ eem (..) and it says (..) that everybody must have a bath (..) in the Shamm en-Neseem evening (....) before the Shamm en-Neseem aam (..) that they believe that aah (....) that there's a legend saying that the Shammamah aam (..) Shammamah (....)/
- T. Goes around sniffing?/
- S. Right goes around sniffing eeh (..) to see who (..) who hasn't bathed (..) that's it (..) and curse him/

Original text: Maybe the most remarkable aspect of this picturesque festival is the thronging of Egypt's total population in the streets, gardens and on the Nile, all dressed in their newest spring outfit and out since the early hours of the day to smell the spring breeze. Egyptians still refuse to cast aside their winter clothing before this great day symbolizing the advent of spring. Children have been bathed on the eve for fear that the 'Shammamah' sniffing around when all are asleep, discovers a foul smell. A remnant of ancient Egyptian legend, the 'Shammamah' was supposed to curse all who have not bathed on the eve of the feast.

Obviously, Mariam missed the idea that Egyptians refused to cast aside their winter clothing before Shamm en-Neseem's day and she was also unable to talk about the Shammamah legend. This was clearly marked by the two long pauses she made which cause the interviewer to solve the problem by providing her with a cue. Furthermore, she started her report by generalizing and then recalling an idea (hanging onions outside homes) that was previously mentioned in the third paragraph and was not included in the paragraph she was recalling. This was a clear indication of Mariam's inability to decide the exact content of the paragraph and to reflect on one of the important activities that accompanies Shamm en-Neseem celebration which was assumed to be easier to remember for those who belong to the culture. In contrast, Shayma was clear right from the beginning; her report included all the main ideas and supporting details. It was also noticeable that she used clearer sentences with no long pauses and even the short pauses were fewer in number and were probably used to organize her thinking to see whether what she was saying fitted into the context rather than as a sign of confusion or lack of information, as in Mariam's case.

As for the Danish related text (Fastelavn festival), the Egyptian subjects were also able to recall successfully the main idea and the details and their performance was consistent during the think aloud task until they completed the whole text. They even recalled more ideas than the Danish subjects which was in itself a surprise. These findings go against the second hypothesis which predicts that Danish subjects will recall more of the Danish related texts since they belong to the culture. Before further discussion of the findings is made, let me first examine some excerpts from the Egyptian students' verbal reports of the Danish text. All the three subjects successfully reported the information in the first paragraph of the Fastelavn text. Similar to the Egyptian related text, the first paragraph was relatively easy because the paragraph was short and the topic sentence functions as the main idea for both the paragraph and the whole passage. In addition, it was located at the beginning of the paragraph and thus, easy to remember and recall. Unlike Mariam and Shayma, Marwa produced a more accurate report including the exact names of food and activities. For example, Mariam and Shayma had difficulty remembering words such as Fastelavnboller and shrovetide buns and as a result they were not able to talk about them, instead both subjects used a general phrase. Mariam said 'they eat some kind of buns' and Shayma expressed this by saying 'and most boys and girls (..) ah (..) well celebrate that day by eating certain kinds of foods' Another

useful observation is that none of the three subjects mentioned that Fastelavn is the Monday before Ash Wednesday. One possible explanation may be that they are Muslims and that therefore they couldn't activate the right religious schema.

Although the three subjects somewhat lack grammar competence, Marwa and Shayma's verbal reports showed that they were keen to produce clearer and more coherent utterances than Mariam. Their think aloud protocols included many verbs and connecting words and phrases such as 'and', 'or', 'then', 'so', 'how', 'also', etc. The following are the comments they produced after reading the second paragraph of the Danish related text:

Marwa's report

O.K. (...) well the second ah paragraph tells how the kids (...) or the children start their day/ they wake up at about four or five (...) em (...) with (...) branches from trees eem (...) decorated with paper flowers coloured paper flowers (...) and they go into their parents' or grandparents' bedrooms (...) and they beat their bedclothes with the branches (...) and they ask them for buns/ (...) and so the parents or grown ups wake up (...) they get up from under their covers (...) and they give them (...) Shrovetide buns and sometimes candy/ (...) ah (...) and em it tells that this ah day or that festival ah (...) em (...) it like a (...) em something from the ancient days (...) and oh (...) O.K. (...) eeh from the time that Easter smacks were delivered in that side of the country or something like that (...) ah (...) that's all I can remember./

Shayma's report

Well er (...) it is speaks about ah em (...) children in some places and how they celebrate their day/ they wake up in the early morning ah (...) and they take branches and go to their parents' rooms and waken them by em (...) these branches asking them for candy or for Fastelavnboller or something like that (...) then em (...) these parents ah (...) ah (...) wake up and give them candy (...) ah well (...) ah they also say that this custom might have been existing since old times/

Mariam's report

Yes (...) I think people eh (...) kids (...) um (...) takes some branches decorate it with some coloured flowers bright brightly and they wake their um (...) um (...) go to parents and grandparents room and try to wake they them up (...) er (...) by beating their (...) sheets (...) er (...) and then saying that they should give them buns (...) um (...) and it's about that they do this five or six o'clock in the morning (...) um/ (...) the the (...) then they have this Fastelavn about the spring the beginning of the spring were some um (...) Easter snacks are found (...) in the country yea that's it/

Original text: In some places children armed with 'Lenten birches,' or branches decorated with brightly colored paper flowers, rise at four or five in the morning, enter the rooms of parents or grandparents and waken them by beating the bedclothes with their switches. 'Give buns, give buns, give buns,' the children shout, meanwhile inflicting resounding smacks with their branches. From the mysterious depths of the covers the 'sleeping' grown-ups always produce the traditional Fastelavnboiler (and sometimes even candy), with which the youthful tormentors customarily are rewarded. Possibly this custom survives from ancient times when 'Easter smacks,' delivered in many lands at this season, were regarded as part of an early spring purification rite.

From the above excerpts we can see that despite Mariam's success to recall the main idea and most of the details, her utterances are not as coherent as the other two subjects. She sometimes provided part of the original sentence(s) without making the right connection or clarifying the context. Her hesitation is marked by the short and long pauses(fifteen short pauses and two long pauses), repetition of words (bright, brightly),and the frequent use of words such as 'the', 'this' and 'that'. As has been discussed above, it appears that Mariam's problem lies in her limited knowledge of vocabulary. Marwa and Mariam mentioned 'Easter smacks' in their protocols but were unable to reflect more on that; they did not report that Easter smacks were regarded as part of an early spring purification rite. As was the case with Ash Wednesday in the first paragraph, subjects' failure to recall this idea was due to lack of schema. Because they are Muslims, they may not know much about Easter and its traditions especially the old ones. This is probably the reason why Shayma failed to recall the whole idea.

The Egyptian subjects' response to the last paragraph of the Danish text was better than the Danish subjects. Although they were reading an unfamiliar content, they were able to recall more ideas and some other details. If we look at the reports of both Shayma and the Danish subject, Camilla, we will immediately recognize the difference:

Shayma's report:

- T. This is our last question Shayma and I want you to tell me what the idea of the last part of the passage is about/
- S. It speaks about people in seaport towns ah (..) well (..) eem Fastelavn boats are considered one of the main features of these festivals/ aah (..) a large boat ah (..) where twelve people (..) twelve seamen are (..) is placed ah is placed on a truck moved by many horses and aah horns (..) player are sit beside the driver and aah (..) carrying the national flags and aah announcing the approach of the (..) procession aam (..) well then (..) aam (..) aah (..) this procession is followed by and aam (..) town's folk folks and

aah aam (..) musicians play music and then dance/ aah well aah contributions are collected for sick people and poor seaman./

Camilla's report

- T. O.K. do you have any idea of what the last part of the text is about ?/
S. Eeh (....) no/
T. O.K. let's (..) see about it then/
T. What do you think it was about?/
S. It was about (....) some old traditions with a boat coming with () and the people (....) they (..) yelling and the (..) men dancing there is (....) I don't really understand what (..) what it is/
T. So you don't know this eeh (..) this ritual ?/
S. No not at all (..) I've never heard about it/

Original text: In some Danish seaport towns the Fastelavn boat is a feature of the season's festivities. A great boat manned by twelve seamen is placed on a truck drawn by several horses and paraded through the street. Horn players sit beside the driver. A seaman carrying the national flag announces the approach of the truck, which is followed by members of the Seamen's Guild. The unique procession halts frequently during its progress through the town. 'The ship is coming!' shout the townsfolk. The musicians play and the men dance. Contributions are collected for sick and needy seamen.

In her report, Camilla clearly stated that she does not know this part of the celebration; it was absolutely new to her. When she was asked to report what she understood, her report was very short and included few ideas. Camilla's inability to recall this cultural event was marked by long pauses and the use of phrases such as 'I don't really know', 'no, not at all' and 'never heard about it' In contrast, Shayma, managed to report most of the ideas in this paragraph correctly despite the unfamiliarity of the content. There may be factors other than familiarity which account for the better recall of the unfamiliar text (Roller and Matambo, 1992). As Carrell (1983) suggests, it may be a novelty effect and this is why Shayma was able to reflect positively on the unfamiliar content.

8.9.2 Prediction task

The think aloud data showed that there was a tendency among Egyptian subjects to generalize when they were asked to expect what will be discussed in the following paragraph(s) of the Shamm en-Nessem text. The following is Shayma's expectations:

Second paragraph:	Well (...) guess he will mention how ancient Egyptian celebrated this/
Third paragraph:	They'll complete speaking of how Egyptians celebrate ah (...) this (...) feast (...) the rest of the (...) day/
Fourth paragraph:	I think more about ancient Egyptians (...) er (...) maybe other things (...) about how they celebrate it/ (...) something like that/
Fifth paragraph:	I think eeh (...) they'll they eeh (...) go on speaking of eeh (...) ancient Egyptians but not food maybe about aah (...) some games they played aam (...) something like that/

The above comments obviously show that Shayma was not able to make accurate predictions of the content of the subsequent paragraphs. However, her expectations of the content of the last paragraph indicated that she was aware that the writer would change the topic. In the previous paragraphs, the writer discussed the importance of certain types of food in the festival i.e., lettuce, eggs, onion, and salted fish. As a result, Shayma expected a different topic to be presented, i.e. games and parties. Similar comments have been made by the other two subjects except one comment in which Shayma and Marwa expected a comparison between modern and ancient Egyptians' practices. Still, this is considered a general guess which can easily be drawn from the text. In fact, the tone of the passage reflects this type of comparison.

The three Egyptian subjects started their expectations of the second paragraph of the Danish related text in a similar way, i.e., generalizing. For example, when Mariam was asked what she expected next, her response was of a general nature: 'I think he'll continue (...) describing what people do on this Fastelavn day (...) saying (...) how people enjoy it (...) and (...) how they (...) how they em (...) deal with each other/'. Shayma also expressed her expectation in the same manner: 'Ah (...) I think they will speak about (...) ah (...) that ah (...) festival as (...) that festival and how different people celebrate the day (...) ah/'. Marwa's response differed slightly because she added some specific points. She said: 'Well (...) they probably gonna keep talking about that festival (...) and eh (...) gonna explain what children or adults do since they wake up in (...) ah you know (...) till the (...) end of the day./'. It seems that Marwa followed a strategy different from that of the other two. Marwa built her expectation on the assumption that since Fastelavn is a school holiday and children were given special kind of sweets to eat, the writer will automatically talk about the other activities children do from waking up until they go to bed. This logical inference drawn by Marwa may be attributed to reliance on the linguistic cues provided in the text, i.e. school holiday, the gayest day for boys and girls, children eat buns, and play useful games.

Although the students tried to make use of their linguistic knowledge as well as their background experience to draw accurate predictions, it was a hard task for them. For example, when Shayma was asked to predicate the content of the third paragraph, she responded: 'As he has already spoken about children I guess he'll be speaking about elder people and other places (...) something like that (...) how they celebrate the festival./' Although her response was reasonable, it did not match with what was written.

The writer's continuation of talking about children games and activities and the lack of information about how adults celebrate that festival, led Shayma to suggest that adults' activities would be tackled at this point. Similarly, Mariam attempted to link what she already knew to what was coming next in order to come up with a reasonable prediction. When the interviewer asked her to predict the content of the last paragraph she said 'Ah (..) I think it will (..) he'll say anything about the end of the day (..) em (..) and how they'll be ready to prepare themselves for em (..) another day coming/' Again, Mariam's expectations appeared to make sense but unfortunately it did not match with the writer's idea.

8.9.3 Danish subjects

The think aloud data and the interviews showed that the Danish subjects' comments on both texts were shorter than those of the Egyptian subjects. Perhaps the most important finding of the present experiment is that the Danish subjects' responses were inaccurate and included fewer ideas not only from the unfamiliar content but also from the culturally related text. Mette was exceptionally much better than Karen and Camilla. Karen's recall of the first paragraph of the Egyptian and the Danish related texts is evidence of such inaccuracy. She provided insufficient information when she was asked to talk about the content of the first paragraph:

Karen's report (Danish text)

'Oh it eem(..) tells us that it's school holiday and that (..) we eat this eem Fastelavnboller eem (..) but but I'm () () traditions eeh (..) Fastelavn/'

Original text: Fastelavn, the Monday preceding Ash Wednesday, is a general school holiday and one of the gayest times of year for boys and girls. Everybody celebrates the day by eating Fastelavnboller, or Shrovetide buns, which are as important in useful games and customs as in festive adult menus.

Karen's report (Egyptian text)

'Oh it's eem (..) it's a tradition that eem (..) that kind of a feast that's eeh (..) in the middle of spring (..) aah (..) when it first start in the beginning of spring/ and (..) it hasn't change for the last eeh (..) five thousand years and eem (..) eem (..) obviously enjoys their feast/'

Original text: The ancient Egyptians revered the coming of spring and called it Shemou, a term which exists today in modern Egypt in the name of Shamm en-Nessem (or the smelling of the breeze). The name

has altered somewhat but, surprisingly enough, the festival has remained unchanged for more than five thousand years, still bringing awe and rejoicing to the minds and hearts of all people.

It was predicted that Danish subjects will encounter some problems when recalling the unfamiliar text of Shamm en-Nessem and on the other hand they will be able to reflect and elaborate more on the text that represents their own culture. Contrary to this hypothesis, Karen failed to go beyond the simple explanation and basic ideas even when talking about the Fastelavn festival. Karen's failure to report more main ideas and their supporting details from both passages was repeatedly observed through out the think aloud task. There are several indicators of her incapability to reflect on the text some of which are long pauses, interviewer's frequent interference, short answers, vocabulary knowledge and the like. Karen herself admitted in the interview that she had some difficulty with vocabulary. She also had difficulty reporting the fifth paragraph due to lack of vocabulary knowledge: 'Well now about playing different games and eem (...) and this eem (...) vocabulary () and aah (...) well we hear that the original was a live eh (...) cat/'. Camilla's report on the first paragraphs was similar to that of Karen, but she performed slightly better on other segments of the passage. Although her speech included clearer utterances, more ideas, as well as her personal experience, it was not as rich as expected. The following example illustrates how her performance improved:

Camilla's report (second paragraph-Danish text)

S. Eem (...) it said something about the smaller kids who get (...) these Lenten switches/

T. Eh (...) em (...) yes/

S. And then they go in (...) in the morning and wake up their parents or their grandparents with them and they get a plum or candy or something/ er (...) and then there is something about (...) the candy who (...) deserve right (...) that this inheritance from Easter isn't it? (...) or something ?/

T. Yes that's right (...) yes/

Original text: In some places children armed with 'Lenten birches,' or branches decorated with brightly colored paper flowers, rise at four or five in the morning, enter the rooms of parents or grandparents and waken them by beating the bedclothes with their switches. 'Give buns, give buns, give buns,' the children shout, meanwhile inflicting resounding smacks with their branches. From the mysterious depths of the covers the 'sleeping' grown-ups always produce the traditional Fastelavnbolle (and sometimes even candy), with which the youthful tormentors customarily are rewarded. Possibly this custom survived from ancient times when the 'Easter smacks,' delivered in many lands at this season, were regarded as part of an early spring purification rite.

Despite the improvement in Camilla's report, she missed many ideas that are central to the meaning of the paragraph. It appears that cultural background did not assist in comprehension. The use of question tag 'that this inheritance from Easter isn't it? (..) or something?/' indicates that she was not confident of whether what she was saying fitted into the context. It was surprising that Camilla and the other Danish subjects were unable to recall the idea associated with Easter and thus failed to activate their religious schema.

The three Danish subjects used the same strategies when reflecting on the Egyptian related text. As with the Danish related text, Camilla and Karen's reports were short with few ideas and unconnected utterances. Karen's verbal report on the second paragraph of the Egyptian related text, reflects these observations: 'And (..) eem (..) they eh (..) use a certain kind of plant to (..) em (...) to eh well mix an oil (..) it's eeh (..) suppose to be for fertility/ and eh (..) they apparently do the same thing or use the same plant eem (..) still/'

Although Karen talked about the gist of the paragraph, several idea units are still missing and the utterances are not coherent. It appears that Karen is a bottom up processor who spends much time on the decoding process rather than understanding the meaning of new words from context. The time she spent on word decoding did not allow her to search for the right schemata that result in effective comprehension.

8.10 PREDICTION TASK

Danish subjects were more specific compared to the Egyptians. However, the predictions of both groups can be categorized under generalization. Mette responded to the question "what do you expect from the next paragraph?" in the following : 'Well I would expect that they would say more about this Fastelavn and I could er (..) imagine that they would tell about how we em (..) eh (...) oh (..) I don't know how to say it in English but (inaudible) and how/eeh (..)/ yes we celebrate the whole day how emm (..) by singing for people (..) in their houses and so on/'. It is clear that Mette had a clue of what she expects next; 'singing for people in their houses' which is a Danish tradition on Fastelavn. Unlike Marwa, she relied on her cultural background in order to draw inferences and come up with the right expectation. Camilla is another Danish student whose cultural background helped her to guess the ideas in the next paragraph. She said: 'Maybe something (..) about (..) when you (..) hit the (..) the barrel (..) or something/'. Although she relied on her cultural background to come to this conclusion, her expectation did not match with the information presented in the second paragraph. Actually, it was the idea discussed in the fifth paragraph . Karen's response was of a general nature similar to those of the Egyptian students: ' () Aah (..) I guess (..) something about eem (..) how we dress out and aah (..) what happened (inaudible)/'. Unlike the other two Danish subjects, she did not use her cultural background as a means to facilitate her guessing process, neither did she rely on the linguistic cues provided by the text as did Marwa, the Egyptian student.

8.11 SUMMARY

From the observation of the six think alouds, we can draw some conclusions. Following Susan Wade's (1990) categories, Marwa, Shayma and Mette are considered good comprehenders. They are interactive readers who are capable of constructing meaning and monitoring their comprehension. The verbal data has shown that they made reasonable inferences about the topic of the passage as well as main ideas in each paragraph. They often recognized when more information is needed to confirm their hypotheses and abandoned their original ideas in favor of others which more adequately account for all of the information in the text.

Mariam, Karen and Camilla can be categorized as non-risk takers (Wade,1990). Camilla for example, is a bottom-up processor who assumes a passive role by failing to go beyond the text to develop hypotheses. She sometimes looks for cues from the interviewer rather than risk being wrong. When she was asked to tell what the text was about, she often responded that she did not know, or she might repeat words and phrases verbatim from the passage, an indication she was not developing a coherent understanding of the text. When she did venture a guess, it was often in a questioning manner. According to Wade (1990) 'The non-risk taker appears to be a relatively common problem, especially among younger, poor readers. These readers either lack or underutilize their background knowledge and over rely on the text to suggest an appropriate schema but this may never happen. There are several reasons for reliance on the text: one is a lack of background knowledge; another may be difficulty in accessing an appropriate schema when it is signaled by the text. In addition, many younger and poor readers have the misconception that reading is primarily a text-based process-decoding is all that they are supposed to do. Finally, laborious decoding could leave few cognitive resources for the processes of meaning-getting and comprehension monitoring (although other children escape the decoding problem by over relying on their background knowledge)' (p.447).

Both groups fail to predict accurately the information in the following segments of each text. Mette was an exception. As has been discussed above it was a hard task to do. Karen's response to the last question on the Danish text is a good example of such failure. When the interviewer asked her to report her expectations; she said: 'Well (...) it's difficult (laugh)/ eer. (...) actually I don't know/'. The difficulty lies in the way the text is structured which does not help students to make accurate predictions. The collection of descriptions text type is considered the loosest type and therefore difficult to process (Meyer, 1975, 1977). It includes listing and description of events and activities that could be located in any position. In certain cases, one can simply change the position of a particular paragraph without the meaning being interrupted. Another possible reason for the students' failure to predict may be their language proficiency. Some of the subjects faced some difficulties in understanding certain vocabulary believed to be central to the main ideas. Mariam, Karen and Camilla represent this case. A third reason

could be the novelty of the information which can play a double role. It could be a motivation for students to recall something new but interesting. On the contrary, it may cause severe problems because of the unfamiliarity of it. Students sometimes come across cultural events that they have never heard about before they read the material.

There are several interpretations of the results of this experiment. First, cultural background knowledge affects reading comprehension and recall. Egyptian subjects were able to recall more of the Egyptian related text and thus hypothesis one was confirmed. However, familiarity with content does not always guarantee that effective comprehension will occur. Danish subjects failed to recall some important idea units from the Danish related text. In contrast, Egyptian students performed well on both texts. So hypothesis two was not confirmed by this study. As for hypothesis three and four, Egyptian students were not as successful as the Danish students in predicting the content of the subsequent paragraphs. So, the answer to hypothesis three and four is that although Danish subjects managed to make more accurate predictions than the Egyptian students, there are factors other than familiarity of the content that may affect this skill, i., text structure. Obviously, the organization of the text affected students' performance on the prediction task and the overall comprehension of the text. Finally, the think aloud technique was effective as it helped students to reflect on the material being read. The students who participated in this experiment produced more idea units than those who participated in the free recall experiment. Moreover, they were able to elaborate more on culturally related topics compared to subjects who participated in the free recall task.

8.12 CASE STUDY ONE

8.12.1 BACKGROUND INFORMATION

The background information presented here is obtained from the questionnaire and the interview with both the student and the teacher. Mette is nineteen years old. She is a student in second grade at "Aarhus Katedralskole" in Denmark. She has been studying English for nine years. She travelled to most European countries and the USA and still has friends in some of these countries. Her teacher described her as an excellent student. She added that Mette achieved good grades in reading tests and praised her reading ability through her observation of Mette's performance on reading activities conducted in class. This give us an overall picture of Mette's level and throws light on her reading skill.

8.12.2 METTE'S PERFORMANCE ON THE DANISH TEXT OF FASTELAVN

Before I start analyzing Mette's transcribed talk, it is worth knowing her responses to the questionnaire. Mette rated the Danish text as very familiar on a five scale measure (new, fairly new,

average, fairly familiar, and very familiar). She also reported that the passage was not difficult and accordingly she did not answer the following questions related to the level of difficulty caused by the passage. On the other hand, she considered the Egyptian text difficult. As for her, this was due to exposure to new culture and foreign names presented in the passage.

I have discussed in chapter three that there are two different views on how the main idea of a text is constructed. Van Dijk and Kintsch (1983) believe that main idea construction occurs automatically while Afflerbach (1990) suggests that readers may use other cognitive strategies to construct main ideas. In the light of this discussion and through my observation of Mette's think-aloud protocol, two points emerge:

- (1) She constructed the main idea of the entire text automatically. This automatic construction was due to two basic elements (a) the text was very familiar to Mette and therefore she relied extensively on her background knowledge to comprehend the main theme of the passage, and (b) the first sentence of the text was explicit to a certain extent that helped Mette select it as the main idea. In fact, it has a double function; it serves as the introduction of the entire text and the main idea of the first paragraph. Mette found no difficulty in deciding that the first sentence is the main idea of the whole passage but she was not sure whether it is the main idea of the first paragraph since this type of structure includes many descriptions, attributes, events, etc.. The uncertainty of the second possibility (main idea of first paragraph) led Mette to use a cognitive strategy other than automaticity to check and confirm her expectation.
- (2) She used some cognitive strategies in constructing the main idea of each individual paragraph (e.g., initial hypothesis strategy).

In this case, Mette constructed the main idea statements automatically (following van Dijk & Kintsch 1983; and Brown & Day, 1983) and at the same time she used other cognitive strategies to construct main ideas in subsequent paragraphs (following Johnston & Afflerbach, 1985; Afflerbach, 1990). Although Johnston and Afflerbach identified four strategies used in constructing main idea, they did not ignore the role of automatic construction process. Mette's expectations of the Danish text matched to a great extent the sequence of ideas presented by the writer of the passage. The familiarity of the event helped her to guess the writer's ideas. Indeed it is difficult in such a text to figure out what exactly is coming next. As we have stated earlier, this kind of expository prose is considered the loosest type of discourse and accordingly does not have a certain structure to follow as is the case with narratives (Meyer 1975).

Mette has probably relied on both her cultural background as well as her linguistic ability to draw inferences from the passage. This was obvious when she remembered a lot of the details and produced further elaborations. The following segment of her talk is a good example of this:

Mette : “Well it tells us about the children they wake up their parents er (..) with rice and they are singing er (..) give buns and oom (....) and get candy or (..) Fastelavn Fastelavnboller then/ and how the older dress with masks and beautiful costumes and they collect coins to (..) to Fastelavnboller or candy (inaudible) and er (..) they collect in the neighbourhood they are singing for people in the doors (..) yes (..) yes/”

T : “ You know these creatures ?/”

Mette : “ Yeah I know them I em (..) did it myself when I was little/ it’s very funny it’s a very good day for children and I think that it’s it’s (..) a good tradition and and it’s a (..) it’s something that oom (..) what can I say now ? that it’s special for them (....) we have with tradition (..) O.K./”

In this part of the talk, Mette reported the main ideas (singing for buns, collecting coins, wearing masks, etc.). She even tried to use the exact words and phrases used by the writer of the passage. Moreover, she told us her experience of the event when asked by the teacher. The flow of her speech and the number and kind of pauses that occur between utterances (13 short pauses and 1 long pause) indicate that she was confident about what she was reporting and not as hesitant as other subjects.

Mette continued to make reasonable inferences and correct predictions as she read along. She draws on her extensive knowledge as she reads the passage about the Danish festival “ Fastelavn”. Let us examine the following portion of her talk to see the kind of strategy she used:

T. O.K. what do you expect from the rest of the text? I mean the next part/

S. Er (....) maybe they could tell more about this old Danish tradition and em (..)/

T What parts of the tradition?/

S. Maybe when we do er (..) when we have the cat king or the cat queen and the er (..) eeh (..) *Sla Katten af Tonden* I don’t know how to say it/ and eer (..) I think that’s what the next part will be about/

T. O.K. let’s see if you’re right (....) so I guess you are right/

S. Yea you can say so about the cat king and (..) and knocking the cat out of the barrel as it’s called in English/ eeh (..) well it’s also about how (..) how the parties there’s a lot of different games for for the children how they have fun in this day/ (..) so I guess this that is what it’s about/

It seems that Mette used the initial hypothesis strategy suggested by Johnston and Afflerbach (1985). The initial hypothesis is often used when subjects read familiar rather than unfamiliar texts. The authors claim that if the reader feels a reasonably accurate initial hypothesis of the main idea can be generated, based on the title, first sentence, or a skim of the text, the reader does so, and then proceeds

through the text, monitoring the accuracy of the hypothesis, and modifying it when appropriate. Mette made an initial hypothesis about the main idea which was confirmed later after reading the entire paragraph. She was monitoring her reading and modifying this hypothesis until she came up with the main idea presented (the incident of “cat king”) followed by other minor details. In fact Mette used the same strategy at an earlier stage. She used it when she was exposed to the title of the passage. She was checking the information while reading in order to confirm her hypothesis. This checking process led her to construct the correct main ideas supported by the details and further elaborate and reflect on her own experience as a member of the Danish culture.

The use of initial hypothesis strategy with familiar texts was supported by empirical research (e.g. study by Afflerbach,1990). The results reported here are consistent with the schema theory, which suggests that prior knowledge of the content domain helps the reader anticipate the meaning of a text. According to schema theory, certain cues in the text activate the reader’s schemata. Once these schemata are activated, readers use them to generate hypotheses about the content and structure of the text. Thus, the richer the prior knowledge, the more opportunities the reader will have to generate an initial hypothesis about the main idea of a text.

Although Mette’s responses matched to a great extent the sequence of events in the texts, she failed to report the celebration at Danish seaport towns mentioned at the end of the passage. She thought that all the activities associated with Fatelavn are mentioned. She was even surprised when she read the last paragraph which included information on how people at a seaport town celebrate the festival. In the following part of Mette’s talk, she told the interviewer that she did not expect any other events :

- T : O.K. can you guess what the rest of the text is about?/
 S : Aha (..) eem (....) well I guess it goes on with this (laugh) oh ma (....)/
 T : Are there any traditions that hasn’t been mentioned?/
 S : Aah (....) I really don’t think so I think well now (..) it’s everything I can’t remember anything
 yea O.K. yea O.K./

Her expectations on the last paragraph was hindered by the unfamiliarity of the incident and as a result she was not able to remember much of the activities associated with that incident. This is illustrated in the following protocol of Mette’s talk on the last part of the text:

Mette’s protocol

- T. And what do you have to say about the last part of the text ?/
 S. Well actually I never (..) I never er (....) did this part of the text I never (..) eem I’ve tried it and I never heard about it either so it’s kind of a surprise eer (..) that they’re driving down the street and

and they all shout the ship is coming and it's (..) it's kind of a surprise anyway er (..) I never thought that we did such things in Fastelavn (..) O.K. (....) yea (..) so it must be an old tradition./

Original Text : In some Danish seaport towns the Fastelavn boat is a feature of the season's festivities. A great boat manned by twelve seamen is placed on a truck drawn by several horses and paraded through the streets. Horn players sit beside the driver. A seaman carrying the national flag announces the approach of the truck, which is followed by members of the Seamen's Guild. The unique procession halts frequently during its progress through the town. "The ship is coming! The ship is coming!" shout the townsfolk. The musicians play and the men dance. Contributions are collected for sick and needy seamen.

The unfamiliarity of the text and the subject's linguistic ability played an important role in causing comprehension problems. Her confusion was marked by the use of language fillers (i.e., er, eem, eer, oh, ok, yea), repetition of negative forms (i.e., never) and the use of other phrases such as 'never heard about it', 'surprise, never thought that we did such things in Fastelavn, so it must be an old tradition'. Our observation of this behaviour indicates that being a member of a culture does not always secure the comprehension of a text based on that culture. There are other elements that have to be considered.

It has been argued that it may be considerably difficult for students to identify main ideas in naturally occurring texts, due to the complex structure and novel content of these texts.

Although Mette was categorized as a good comprehender, she had been labeled as having reading difficulties, as she exhibited poor word attack skills and lacked fluency in oral reading. Her ability to draw on the background knowledge and her comprehension monitoring strategies may be the reason she was able to understand as well as she did, despite her problems in word recognition.

8.12.4 Mette's performance on the Egyptian text

Mette's performance on the Egyptian text was remarkably different from her reaction to the Danish text. She used different strategies when she read the text. The selection of strategy depends on the structure of each paragraph and the nature and amount of information presented in it. In constructing the main idea of the entire text and each paragraph, Mette used two strategies; the listing strategy and the strategy of draft-and-revision. According to Afflerbach (1990), readers use the listing strategy significantly more often when reading text in the unfamiliar content domain. The following part of Mette's talk will illustrate this point :

T : We'll now go to the text about the ancient Egyptian traditions (..) what does the first part of the text tell you ?/

S : Well aah (...) it tells about the ancient Egyptians aah (...) tradition/ they don't have Fastelavan as we have in Denmark but they have something called Shemou and it's you I don't know if you can call it like it's like eeh (...) Fastelavn but it's kind of it/ and it's a festival and it's eeh (...) it's eeh (...) very long in tradition and it has existed for a thousand years and eem (...) it's eh (...) something that the Egyptians like and look forward to as we do in Denmark when we have first Fastelavn/

It is obvious that Mette succeeded in constructing the main idea of the first paragraph which at the same time functions as the main idea of the entire text. But in order to do so, she searched for other related ideas and concepts which exist either in the text or her working memory. In addition, she tried to link what she obtained from the text with what she already knows. For example, when she was telling the interviewer about Shamm en-Neseem, she always referred to the Danish festival of Fastelavn. :

“They don't have festivals as we have in Denmark”

“I don't know if you can call it, it's like Fastelavn”

“ Something that the Egyptians like and look forward to as we do in Denmark when we have first Fastelavn”

Mette used the same strategy when she read the fourth paragraph. When discussing the role which eggs play in the Egyptian festival, Mette tried to compare it with Easter, a festival that she knows well and celebrates every year in Denmark. The comparison which Mette made is demonstrated in the following words :

S : Well we have err (...) also in April we have (inaudible) and it's it's kind of the same we we colour eggs and (...) and eh (...) it's not kind of the same but it (...) you can you can compare it I guess ../

T : Yes/

S : Because it (...) we do the egg things and I guess we also think it's a beginning of life ours is more a (...) a symbol of our religion I guess/ (...) I don't know about their but (...) I think you can (...) you can say it's kind of the same/

The listing strategy may represent an attempt by readers to induce the relations between words, phrases, and concepts as they read a text. Expert readers with high prior knowledge may not need to use the listing strategy as often because they could map the information from the text onto their existing knowledge structures. In contrast, the readers with low prior knowledge had to search for connections

between elements of the text before they could construct a main idea statement. As I explained earlier, prior knowledge of the content domain facilitates automatic construction of the main idea of a text. In contrast, readers without such prior knowledge more often use the strategy of draft-and-revision. The task of constructing the main idea is difficult even for accomplished readers (Brown & Day, 1983), and the lack of prior knowledge may have compounded the difficulty. The draft-and-revision strategy helps readers negotiate the task within the limitations of working memory. The strategy allows the reader to draft and store a main idea statement about the unfamiliar text, and then return to the text to revise the statement. Thus, the draft-and-revision strategy may serve to break the difficult construction task into two more manageable subtasks.

Mette's performance on the Egyptian text makes us assume that she can also be categorized as a storyteller (Wade, 1990). Storytellers are extreme examples of top-down processors. They tend to draw far more on prior knowledge or experience than on information stated in the text. Many seem to identify strongly with a characteristic in a story and make causal inferences based on what they would do. Like other types of top-down processors, storytellers understand that reading is a meaning-based process. However, as in the case above, the meaning they construct from the text can be very different from the author's intended meaning. Their meaning consists primarily of their own elaborations; there seems to be little awareness of any discrepancy on the part of these readers, who fail to check their understanding against the text. Like the schema imposers (see Wade, 1990), this may be due to decoding difficulties or lack of strategies for comprehension monitoring.

Mette relied on her own elaborations when she was reading the Egyptian text. For example, in the first paragraph she added: "something that the Egyptian like and look forward to as we do in Denmark when have Fastelavn". This is not stated directly in the original passage. In the third paragraph, she even went further when she was commenting on the use of onion in the Egyptian festival. After she talked about the content of the third paragraph and explained the main ideas (i.e., healing power of onion, hanging bundles of onion outside homes, putting onion under pillow/smelling it first thing in the morning.), she continued to talk about beliefs about onion in Denmark. In addition she mentioned garlic and tried to explain the role of garlic in the Danish traditions. This will be clearly shown in the following part of her talk:

- T : Do we know this in Denmark ?/
 S : No (..) I (..) I don't think so/
 T : No?/
 S : Not not about onion I don't think/
 S : Yea (..) garlic garlic is better in Denmark not not onion/
 T : No?/
 S : I don't think/

- T : But then on the other hand (..) garlic is not a traditional Danish plant?/
 S : No (..) I guess it's more a stone you'd have under your (..) pillow/
 T : (laugh) O.K./

As we can see from Mette's responses, she continues to confirm her hypothesis even if the interviewer provides hints that it is not a Danish tradition. I think in this part of Mette's talk she behaves as if she is a schema imposer. According to Wade (1990), the schema imposer is a type of top-down processor who holds on to an initial hypothesis despite incoming information that conflicts with that schema, seemingly unaware of alternative hypotheses. She was forcing the new information to fit her schema (Unlike the Egyptians, Danes use garlic in their tradition, put it under pillow, etc.).

Students who fall into this category over rely on top-down processing, maintaining an activated schema when it is no longer useful. They do this by forcing new data to fit the schema, as illustrated above, or ignoring conflicting information. The strength exhibited by these readers is that they see reading as a meaning-constructing process, but you probably should not trust them to follow a recipe.

Over reliance on top-down processing may be related to decoding difficulties in some cases; that is, the reader may escape the laboriousness of text-based processing by guessing at the general meaning of the text and filling in details from prior knowledge. Alternately, the reader may be unable to use strategies for comprehension monitoring to check his or her understanding against the text.

8.13 CASE STUDY TWO

8.13.1 BACKGROUND

The background information obtained here is from the questionnaire and the interview. Marwa is fifteen years old. She is in the second grade at al-Amal secondary school in Cairo, Egypt. She has been studying English for about nine years. She also studied in Kuwait and travelled to the USA. Her teacher rated her as one of the top students in class and her performance on the reading tests were excellent. In addition, Marwa has no problem communicating in English. The secondary school stage lasts for three years after which students may join university.

8.13.2 Marwa's performance

Although the Danish text was unfamiliar to Marwa, she had no problem understanding it. She reported that the unfamiliarity of the cultural events and foreign names cause some difficulties in comprehension. As has been discussed above, Marwa was able to reflect on both texts better than the other

Danish subjects including Mette. She seems very articulate and more competent in English than Mette. The observation of Marwa's response and expectations on incoming information show that she relied heavily on her language skills since the Fastelavn topic is unfamiliar to her. She was trying to build a logical relationship among events using any linguistic cues available. Unlike Mette, her expectation did not match the information provided in the intended paragraphs. Most of her expectations were of a general nature and no specifications have been made as in Mette's case. There were cases when she tried to be very specific but the text structure caused serious problems. Here is her attempt to provide accurate predictions of the content information of paragraphs two and five:

Paragraph 2

- T. That's good thank you/ (..) would you tell me what you expect will be mentioned in the next paragraph?/
- S. Well (..) they probably gonna keep talking about that festival (..) and eh (..) gonna explain what children or adults do since they wake up in (..) ah you know (..) till the (..) end of day./

Paragraph 5

- T. That's good (..) again what do you expect from the fifth paragraph?/
- S. Eh (..) maybe he's gonna talk about another game or (..) he's gonna keep (..) explaining what happens for the rest of the day/ (..) maybe talking about grown ups (..) I think/

In order for Marwa to come up with the right expectations, she spent a lot of time trying to build a logical relationship between paragraphs. In paragraphs three, four, and five of the Danish text, she kept expecting the writer to provide information about how adults celebrate the festival:

Paragraph 3 O.K. they probably now (..) they are gonna talk about after the grown ups wake up what (..) what do they do for the rest of the day now/

Paragraph 4 Well since (..) they were saying that they were collecting coins for the feast (..) they are probably gonna talk about the feast and (..) ah how the grown ups are getting ready for it and something like that/

Paragraph 5 Eh (..) maybe he's gonna talk about another game or (..) he's gonna keep (..) explaining what happens for the rest of the day/ (..) maybe talking about grown ups (..) I think/

It was easy for Marwa to use this strategy in drawing inferences from the first and fifth paragraphs and accordingly use the information to guess the incoming events. The first paragraph describes how children celebrate the feast by waking up their parents early in the morning, and as a result Marwa thought that the writer will continue talking about what they do after they wake up. As for her, the final paragraph was expected to be a conclusion and description of how they celebrate the end of the day. This strategy failed when it was used to understand other paragraphs because of the lack of cultural background and the failure to use words of signaling that could help in expecting the incoming information. We should be reminded here that the text structure causes confusion and makes it difficult to decide which strategy is effective in predicting the incoming information.

CHAPTER 9

9.1 INTRODUCTION

In this chapter I would like to first highlight the important findings of the study. These are: its contribution to the study of the influence of prior knowledge on ESL/EFL students' comprehension from varying backgrounds, specifically Danish and Egyptian students; its description of strategies used by specific second language learners in reading expository prose, and its introduction to a variety of techniques and activities that help improve ESL/EFL students' reading comprehension of expository texts. Following that, general implications for the teaching of various types of text structures are discussed. Limitations of the study are then mentioned, which may serve as a basis for further research.

Before discussing the implications of the current study, it is worth summarizing the results obtained from the research on the influence of background knowledge on reading comprehension. As has been shown in the previous chapters, the cultural background knowledge of both content and rhetorical organization of texts influence ESL/EFL reading comprehension. Text type also plays an important role in facilitating recall; the amount of recall produced is based on how readers recognize the organizational structure of a text and use it to access information from that text. Indeed, certain types of expository organization interact with readers' background knowledge and processing strategies differently from other types. The better organized the text is, the better comprehension and recall will be. Texts which are loose, that is poorly structured, do not facilitate encoding, storage and retrieving compared with well organized texts.

The major findings of expository structure research (Meyer, 1975, 1977, 1982; Meyer and Freedle, 1984; Meyer and Rice, 1981) and research on the effect of content and formal schemata (Carrell, 1983, 1984, 1987, 1992) can be summarized as follows:

1. Awareness of text structure facilitates comprehension and recall.
2. Comprehension failures may be due partly to the reader's lacking the appropriate schemata required by the text.
3. Second language comprehension failure may be due to mismatches between the schemata presented by the text and those possessed by the reader.
4. Major ideas found in the upper levels of the content structure are better remembered than are those found at the bottom.
5. The type of structure of expository relationships affects recall more when they occur at the upper levels of the content or tree structure than at the lower levels.
6. Different types of relationships have different effects on memory.

7. Students skilled at identifying top-level structures have better recall.
8. Students can be taught to identify different top-level structures.

9.2 CONCLUSION

Based on the results of the study, the investigator inferred that the cultural background knowledge of the learners aid their comprehension of expository texts. He noted that the overall reading performance of Danish and Egyptian secondary school students were affected by the familiarity of the topic being read. The investigator examined how the organization of the text affects the learners' comprehension and recall of main idea units and their supporting details. He confirmed Meyer's (1975,1977) finding, that the least organized text types such as the 'collection of descriptions' type cause severe difficulty for second language learners who read, comprehend and recall such expository texts. Also, he discovered a special influence of the think aloud technique on the amount and quality of the verbal reports of Danish and Egyptian learners. It was a good tool that helps readers reflect on the material being read and thus produces rich verbal protocols.

Substantial evidence from the free recall task sustained one hypothesis of the study. This hypothesis was based on the assumption that students' written recall will be affected by the organization of the texts. An analysis of variance supported two other hypotheses (1&3) at a high level of significance while Fisher's Exact Test partly supported the hypothesis concerned with the recall of items which are closely related to cultural aspects of the texts. The analysis of verbal data obtained from the think aloud task failed to refute the fifth and sixth hypotheses while the data confirmed the hypothesis that prior knowledge affects main idea construction and that second language learners use different cognitive strategies to construct main ideas in expository texts. In addition, information gathered from the questionnaire did not support hypothesis eight which predicted that travel experience and having foreign friends may facilitate recall of culturally related items.

9.3 THE INFLUENCE OF PRIOR KNOWLEDGE AND TEXT TYPE

One of the investigator's most important inferences from the study is that the reader's cultural background knowledge of the topic plays a positive and effective role in second language reading comprehension and recall particularly if the texts are well organized. Although this study did not use well-organized text types such as cause-effect and comparison-contrast (Meyer, 1975), the failure of Danish and Egyptian students to recall main and subordinate T-units from the culturally-related texts supports this claim. In other words, the organization of the texts used in this study strongly affected the way students recalled the information. The investigator believes that failure to recall culturally related ideas was primarily due to the nature of the text structure rather than students' comprehension abilities. Although there was evidence that some subjects suffer from language problems, the fact remains that most students were not able to differentiate between

main and subordinate ideas and specific details. As a result, their written recall protocols were short and included fewer important T-units that represent major cultural aspects of the two festivals. The analysis has shown that none of the subjects in either the Danish or the Egyptian group was able to recall more than 60% of the total number of T-units in the Fastelavn and Shamm en-Nessem texts. However, in the think aloud task, subjects recalled a substantial amount of T units compared to those who participated in the free recall task. This may be an indicator that the think aloud technique facilitated comprehension and encouraged subjects to elaborate and provide additional information about the content of the material. This was an opportunity for the students to report their own experience but at the same time led them to make some distortions particularly with the unfamiliar text.

In both the free recall and the think aloud tasks, the researcher observed that the Egyptian subjects were able to recall more T units from the Fastelavn and Shamm en-Nessem texts than the Danish subjects. To provide an explanation, it is worth referring to Carrell's (1984) study of the effects of rhetorical organization on ESL readers. She found out that there are significant differences among native language groups (Spanish, Arabic, Oriental (i.e. predominantly Chinese) and other (i.e. predominantly Malaysian)) as to which English discourse types are more or less facilitative of recall. It is possible that there is an interference from preferred native rhetorical patterns. She thought that the reason the Arabic-speaking subjects in her study found the 'collection of descriptions' type of discourse equal to the 'problem/solution' type, and better than the 'causation type', may be due to the preferred rhetorical pattern of Arabic which has been described as being one of 'coordinate parallelism' (Kaplan 1966, Ostler 1981, Burtoff, 1983, as cited in Carrell, 1984: 464). We may have a similar case here. Egyptian subjects' performance may be due to their ability to transfer culture-specific rhetorical patterns preferred in Arabic, their native language. But we should be careful to come up with a conclusion such as this since we are not sure whether or not this transference can take place.

According to the view advanced in the study, cultural background knowledge facilitates comprehension of the two expository texts but recall is hindered by the loose organization of the texts. This suggests that devoting reading instruction to the identification of different discourse structures may be effective in facilitating second language reading comprehension retention and recall. In fact, the importance of plans in reading and writing has been emphasized by Meyer (1982). She recommends that different plan types such as comparison, antecedent/consequent, description, time-order, and response can be introduced to help both readers and writers, so that resources like attention and memory are deployed to best advantage. This is important because when people read a text, they must access knowledge from long-term memory and make it active by placing it in working memory. For example, to fully understand and recall the following sentences from the Shamm en-Nessem text: 'Another important item on the Shamm en-Neseem menu is the feseekh or salted fish, a form known to ancient Egyptians.', readers must infer the additional information (in ancient Egypt, when people were fasting, they sacrificed fish to the gods. Then they salted the fish to eat it later after the fast was finished), and get it into working memory. Similarly, readers have to access knowledge from their long-term memory and activate it to make sense of why during

the Fastelavn festival children wake up their parents by beating the bedclothes with their switches and inflicting smacks with their branches. The information that they must activate and get into working memory includes knowledge about 'Easter smacks' and spring purification in ancient times.

The effect of text structure on second language reading and recall was also investigated by the current study. The researcher reached a conclusion that the collection of descriptions discourse type influences readers' recall to a great extent. This led the researcher to a very important conclusion, that recall of text may be facilitated by awareness of text structure, a notion that confirms Carrell's (1992) findings. It is assumed that students who are aware of the different patterns used by authors to organize expository texts, would be more likely to use a structure strategy when they read. This specialized kind of prior knowledge would also help students to be more likely to understand and remember well-organized texts. Awareness of text structure may result in quantitatively and qualitatively superior recall. Students who use a structure strategy will recall significantly more top-level ideas. Meyer's (1982) emphasis on planning may be relevant to this discussion. As was discussed above, her results lend support to the teaching of organizational techniques for planning a text in such a way that it can be read and recalled by wide audiences without undue effort. Because of its importance, she recommends that explicit instruction in identifying and using plans should be included in the curriculum for both reading and writing. As for her, planning can fulfill the strategic functions of organizing data and ideas, highlighting relationships, and informing readers about topics.

The investigator also predicted that T units that are closely related to cultural aspects of the text will be best recollected by those who share the culture. He also predicted that each group of subjects will perform better on the cloze test of the culturally related text. While he failed to strongly confirm the first predicted relationship between cultural background and recall of idea units, he was able to confirm the second hypothesis. What is inferred from these results is that the reader's cultural background knowledge surely facilitates his/her comprehension and recall but only under certain conditions. The data obtained from the item analysis provided confusing results. While some T units which are culturally based were recalled by subjects through schema activation, others were either partly recalled or completely omitted. It appears that because of the influence of factors other than prior knowledge (i.e., text structure), it was difficult to achieve the high level of significance that puts the researcher in a position to confirm the above hypothesis. As for the gap-filling test, it was a different case. Although the students' performance on the cloze tests was good enough to claim a statistical significance and thus confirm the hypothesis, there may be factors other than the readers' cultural background knowledge that helped students to score better on the gap-filling test of the culturally related text, i.e., vocabulary knowledge. However, it seems plausible to suggest that the subjects' good performance may be attributed to the nature of the texts used in the cloze test. These texts were summaries of the original passages used in the free recall and the think aloud tasks. They were short and therefore easy to follow. As we know, summaries serve as a method for organizing the most important information. In order to do so, unnecessary material and material that is redundant are deleted. As a result, subjects focused on the main ideas and were able to provide the appropriate words.

9.4 USE OF STRATEGIES IN MAIN IDEA CONSTRUCTION AND PREDICTION

The think aloud experiment attempted to examine the effect of background knowledge on comprehension, the influence of prior knowledge on main idea construction, and the ability to make accurate predictions based on the reader's background knowledge. The study failed to confirm the fifth hypothesis which predicted that the Egyptian subjects will make more accurate predictions relating to the Shamm en-Nessem text. Although one of the three Egyptian subjects succeeded on one occasion in making the right prediction, the overall performance of all the Egyptian subjects on the prediction task was not satisfactory. They tended to generalize and repeat the same expectations. One of the possible reasons for such performance was the influence of text structure. But their poor performance was partly due to their inability to activate the appropriate schemata. None of the three participants referred to the major activities during the Shamm en-Nesseeem festival in their predictions. In contrast, Danish subjects were able to activate the appropriate schemata for main events in the Fastelavn festival. Their wrong expectations may have only been caused by the influence of the looseness of the structure of the text. Four inferences can be made. One is that it was not easy to predict incoming information from a text that is poorly structured. Second the skill to make predictions needs a lot of training. In some cases, it was not clear whether the Egyptian subjects' inability to predict the incoming content of subsequent paragraphs was due to the activation of the wrong schemata or lack of appropriate training in prediction. Third it is possible that the influence of text structure on the ability to make correct predictions was stronger than the activation of the appropriate schemata. The Egyptian subjects might have activated the appropriate schemata but were unable to employ them as a direct result of the influence of text structure. Moreover, Danish subjects' success in making more accurate predictions should not be understood as the effect of solely activating the appropriate schemata. Language competency may be another factor that might have, besides schema activation, a strong effect on prediction.

As far as main-idea construction is concerned, two approaches were adopted to measure how Egyptian and Danish subjects construct it. Following van Dijk and Kintsch (1983), main idea construction occurs automatically. Afflerbach (1990) believes that main idea construction does not always occur automatically; readers follow other cognitive strategies to construct main ideas. According to Afflerbach, these strategies include: draft-and-revision strategy, topic/comment strategy, initial hypothesis strategy and listing strategy. The data obtained from the verbal reports indicated that both groups of subjects constructed the main idea using different cognitive strategies. In some situations, they constructed the main idea automatically. The subjects' performance on the main-idea construction task varied. This was due to the nature of the idea they are inclined to construct and the passage in which it was presented as well as the subjects' ability to use prior knowledge to facilitate such process. The two case studies presented in chapter 8 indicated that the two participants used different strategies mainly: initial hypothesis strategy and automatic construction. The other four subjects who participated in the think aloud experiment tended to

use the listing strategies. All subjects constructed the main idea of the first paragraph automatically. This T unit served as a main idea for the first paragraph and reflects the theme of the whole passage. The conclusion which can be drawn from this discussion is that the six subjects used different cognitive strategies when constructing the main idea as well as automatic construction. It appears that prior knowledge and the think aloud technique played a significant role in facilitating main-idea construction. This was obvious in the performance of the two subjects who participated in the case studies. The selection of strategy depended on the subjects' ability to activate the appropriate schemata as well as their overall language competency.

9.5 IMPLICATIONS OF THE STUDY

The study has a number of implications for second language reading comprehension. The findings of the study possess special significance for theories dealing with a learner's comprehension of expository texts. Of particular importance are those findings relating to Meyer's (1975) theory of text structure and Carrell's (1983) notions of content and formal schemata which are based on the schema theoretic approach to reading comprehension. Both authors have emphasized the influence of prior knowledge of text structure on the learner's comprehension. Meyer and Carrell's work share a simple assumption: that certain discourse types influence second language reading comprehension and recall. Carrell (1983, 1984) also claimed that the reader's cultural background knowledge facilitates reading comprehension. Reading a familiar content results in better understanding of the passage being read. Unfamiliarity with the content domain of the passage may cause comprehension difficulty. This study lends support to the theoretical stance of Meyer that well-organized texts such as comparison/contrast and cause/effect are easier to comprehend and recall than poorly structured texts. The research findings of the present study confirmed Meyer's claim that the 'collection of descriptions' is the least tightly organized discourse type and thus affects comprehension and recall. As anticipated, subjects in the study recalled fewer T units and failed to recall more idea units even from the culturally related text. This was due to the influence of text structure on their recall. Also, the findings support Carrell's assumption that familiarity with the topic influences L2 reading comprehension. However, it appears that when the two factors work together different interpretations must be expected. The results indicate that the organization of the texts used in this study strongly affected the quantity and quality of the subjects' recall which led the researcher to conclude that the text structure may have a stronger effect in this particular case.

These factors have grave implications for education because much of the school reading material is expository prose and students encounter these types of text structure including the collection of description type nearly every day. As suggested by Meyer (1982) students should be trained to recognize different plan types in both their reading and writing classes. This will familiarize them with a variety of expository discourse types which help them gain insight into the internal organization of such types. Teachers should train students to analyze prose texts in terms of the types of plan and the functions of the

plans that the writer has selected. It must be pointed out that students' awareness of text structure will play a significant role in improving their reading comprehension. In addition, educators and researchers may wish to make major changes in the organization and contents of text materials so that these are more conducive to a general-to-specific strategy of organization. This can be done by adopting a basic kind of text organization which presents the general ideas first in order of importance giving the specific details. Another suggestion is to test text devices such as headings, organizers, and questions which explicitly direct students to focus upon and emphasize the general, major ideas first and then the specific details.

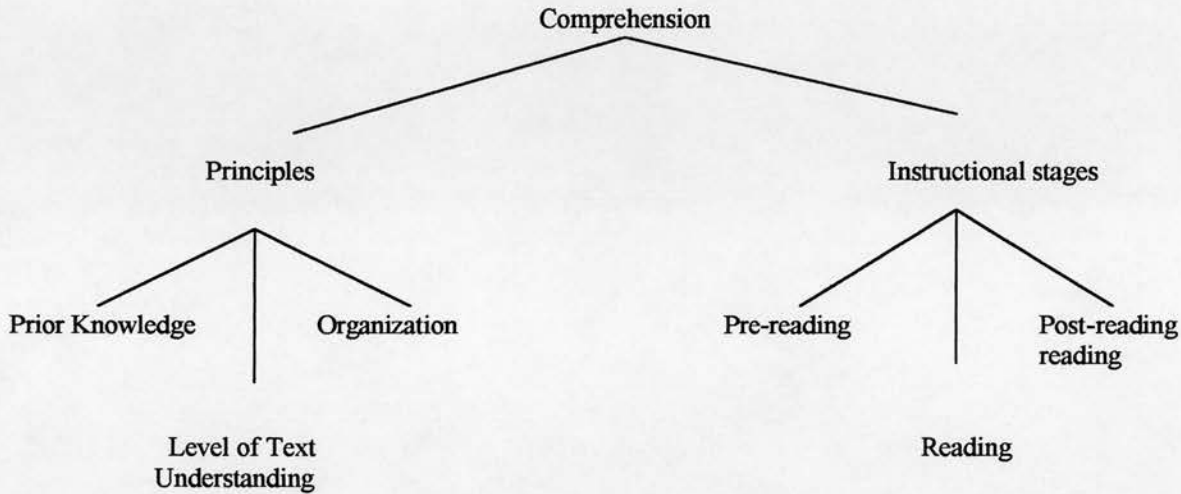
Another important pedagogical finding is that the teacher should give the students the opportunity to reflect on the material they are reading. The findings of this study support Ericsson and Simon's (1980) claim that the think aloud technique is a good research tool that assists in gaining insight into what learners are thinking about while reading. In this study, subjects who participated in the think aloud experiment were able to recall more T units than those who participated in the free recall task. If our purpose is to get reliable results, subjects should be familiar with the technique before they are engaged in the think aloud task.

The implications of this study fall into two categories: one is the specific implications that are concerned with the familiarity versus novelty of the content of the texts being read and the second represents general methodological implications for the teaching and learning of the rhetorical organization of expository texts. The first category deals with strategies that the researcher finds useful in either developing and/or activating prior knowledge as well as main idea construction since the two are important components of the current study. Although the second category focuses on the manipulation of simple forms of text structures, i.e. simple listing, collection of descriptions and time order, it provides a variety of techniques which help students to read and comprehend discourse types other than the one used in this research. There is no doubt that the teacher plays a vital role in preparing students for such learning processes, an issue that I will refer to in the discussion below.

At this point and before presenting the methods and techniques which I recommend for teaching expository texts, it is necessary to give a general description of the principles underlying the teaching of reading comprehension as well as their related instructional stages. These principles are useful in planning and teaching reading comprehension to non-native speakers of English.

Readence, Bean and Baldwin (1981) recognize three psychological principles that teachers should be aware of when planning a comprehensive content area lesson. These principles include: (1) the importance of students' prior knowledge in the acquisition of new information; (2) the level of text understanding to be achieved in the lesson; and (3) the organization of information to aid long-term retention. The instructional stages that are related to these principles are: the pre-reading stage, the reading stage, and the post-reading stage. The principles and the stages are shown in the following graphic organizer :

Figure 9. 1



9.6 INSTRUCTIONAL STRATEGIES

The psychological principles have been discussed throughout this research (see chapters 3 and 4 for full discussion). In this section, I will focus on the instructional stages because of their relevance to the implications of this study. Nuttall (1982) explains the nature of each instructional stage within a reading lesson in the following way:

- 1- **Pre-reading activities** . Activities which prepare the students for reading the text. Such activities could include providing a reason for reading, introducing the text, breaking up the text, dealing with new language, and asking signpost questions.
- 2- **While-reading activities**. Activities which students complete as they read and which may be either individual, group, or whole-class.
- 3- **Post-reading activities**. Activities which are designed to provide a global understanding of the text in terms of evaluation and personal response. Such activities could include eliciting a personal response from the students, linking the content with the student's own experience, establishing relationships between this text and others, and evaluating characters, incidents, ideas, and arguments.

Instructional strategies may be modified. Teachers often tailor strategies to meet specific instructional needs. This practice should be encouraged. However, teachers should take into consideration the effects of any modification in terms of instructional goals. Instructional strategies focus on different phases of the reading lesson. Some, such as visual displays, are strong for all phases, while some, such as reading guides,

focus on a single phase. In addition, different strategies accomplish different goals within a phase of the lesson.

The pre-reading stage receives special attention since it is the stage during which teachers prepare their students for the reading task and activate their background knowledge. During this stage, teachers also evaluate their students' prior knowledge and decide how much they know about the topic they are to read. There are many activities that could be used in the pre-reading stage but in order to ensure that our students are motivated and well prepared for the reading task, effective pre-reading activities should invite them to do the following (Rasinski & Padak, 1996):

1. Consider what they already know about what they'll be reading and share these ideas with others.
2. Anticipate and make predictions about what they are likely to encounter as they read.
3. Develop their own purpose for reading.
4. Build curiosity and motivation for reading.

9.7 FAMILIARITY VERSUS NOVELTY

Although familiarity with the content and text structure has been proven to affect Egyptian and Danish students' reading comprehension, the novelty element seemed to cause comprehension problems when recalling some T units from Sham en-Nessem and Fastelavn texts. This indicates that it is important to determine how much students know before they start the reading task. Here we have to emphasize the role of the reading teachers in deciding the amount and type of background knowledge which their students possess. For example, if the teacher finds that the readers know little or nothing relative to the content of what they're about to read, he/she can take that as good evidence that the reading is likely to be difficult, perhaps even frustrating, and may well be inappropriate. Based on the assessment of students' prior knowledge, teachers carefully plan, modify and change their instructional decisions to suit the teaching and learning situation. Although we recognize prior knowledge as an important factor in reading comprehension, there is one caution to be considered when planning reading activities. It is sometimes true that what teachers identify as being familiar for students does not correspond with what the students themselves identify as being familiar. One of the most important ways to avoid such miscalculations is to encourage teachers to engage in discussion with students about topics to be studied. The effectiveness of any reading strategy that is concerned with developing background knowledge is based on the dynamic interaction that occurs between teacher and students or students and students while this strategy is being used.

Before further discussion is pursued about the use of reading strategies when students know little, some, or more information, I would like to emphasize that there are several issues to be considered as we judge the level of prior knowledge which our students possess. It is also important to consider how our students apply such knowledge to what they learn. As I have discussed in previous chapters, the applicability of prior knowledge in a specific learning situation varies from person to person within any

given task. The specific knowledge, the potential of that knowledge to be accessed, the way it is stored, the degree of its sophistication, and the strength of the links that bind associations all contribute differently to each person's ability to associate new learning to prior knowledge. The goal is not, nor can it realistically be, to create a common, convergent frame of reference for all members of a class. Instead, the goal is to help individuals in a group recognize the prior knowledge they have, evaluate it, organize it, to construct their own frame of reference, and then use it actively to seek new learning. Therefore, in order to ensure a good start in a reading lesson, the reading teacher should ask himself/herself the following questions: What kind of information is in the text and how is it structured? What should I do to make the assignment more appropriate before requiring it of the students? What kind of reading strategies should I use to activate and develop students' background knowledge? Is there enough knowledge to permit comprehension? How should I try to channel students' thinking? What sorts of expectations are they capable of?

When deciding what background needs to be developed for a text (or selection) the teacher must take into consideration the following factors: (1) the text, and (2) the teacher, and (3) the students. One of the major responsibilities of the reading teacher is to examine the text to determine the author's main points. The teacher should identify these ideas because they comprise the key concepts of the selection; they are the basis for determining the background and vocabulary the teacher needs to develop before the students read the selection. It is recommended that the teacher carefully reads the text that students are expected to read and write these ideas and concepts out even if his/her edition of the text provides a summary or listing of the main ideas. It is best for the teacher to read the entire selection and make his/her own assessment of the main points.

The next step is to determine exactly what we want students to learn from the reading. The teacher's purpose may differ from the author's main points. For example, assume that the author's main point in an article about "Arab festivals" is that they are religiously based and that Arabs follow very strict religious rules and rituals in the preparation and celebration of these festivals. However, the article may also discuss other non religious festivals which Arabs inherited from other civilizations throughout history. The teacher may be more concerned that students learn these types of non-religious festivals and the customs and traditions associated with them than focus on the author's main idea. If so, the teacher develops background directed more toward the non religious customs and traditions than toward the author's main idea.

Once the teacher establishes a purpose for reading, he/she must consider the students' backgrounds. If the teacher feels that the students already have the background they will need for the reading, the background development activity should aim at activating or bringing to a level of consciousness the background the students already possess. On the other hand, if the students have no background for the text (or selection), the background development activity should be one that develops as much of the needed background as possible before students read the text/selection. This assessment of the students' existing background is made through observations and getting to know students. Sometimes it is

not possible to anticipate a student's background until teaching has begun. In such instances, it may become necessary for the teacher to alter teaching plans for on-the-spot background development.

As we can see, any pre-reading activity must be based on what the students will be studying and on what the students know about the topic. It is appropriate, therefore, to devote the initial part of any lesson to determination of students' prior knowledge. Once we know what prior knowledge the students possess, we must decide whether it is sufficient for them to succeed with the assignment if we have also helped them establish a purpose and a desire for learning. If we believe the students lack certain requisite information, then we have to provide that for them. I want to emphasize, however, that it is important not to give students a lot of new information. There is always a risk of preceding one difficult learning task with another while actually facilitating neither.

To summarize, in background development, the teacher should do more than simply tell students information or give a lecture. The process of background development should be an interactive one, including teacher-student and student-student interactions. At the same time, teachers should not feel that the process of developing background requires them to do things they will find difficult or impossible. To be effective in developing background for students, teachers must systematically work at the process and utilize strategies that work best for them and their students.

The strategies presented below are designed to avoid such learning difficulties. In fact they facilitate learning by focusing on what the reader actually knows and the interaction between both students and the teacher. During these activities, the students' role is one of considering what they already know about the topic and generating some expectations about what they will learn. The teacher's role is in guiding students' realization of what they know and their use of previously accumulated experiences to facilitate new learning. It is the give-and-take that occurs in the process of these activities that leads to increased learning.

In the following section, I will describe strategies for students who know nothing or little and strategies for students who know some or a lot. Based on the results obtained from this study, there was evidence that the students' recall of the content of the two texts was partly hindered by either the inability to activate their existing knowledge or the lack of that knowledge in the first place. So, the strategies described below will fill this gap because they are effective devices in building, developing and activating prior knowledge. Some of the techniques also provide good training for ESL/EFL students by helping them build background and recognize relationships between ideas and concepts in a given topic. The results of this study also indicated that the collection of description text type affected the quantity and quality of the idea units recalled from Shamm en-Neseem and Fastelavn texts. Therefore another set of strategies will be introduced to serve two purposes: (1) help students read and comprehend the simple forms of text structure (not necessarily the easiest) and (2) familiarize students with other discourse types including the well organized patterns such as comparison-contrast and cause-effect types. By doing so, the researcher offers methods that facilitate the activation of both cultural background knowledge of the content as well as knowledge of text structure.

Some of these strategies are appropriate as pre-reading activities while others work better in the reading and post reading stages. Two important issues need to be emphasized here, one is that some of the strategies have overlapping characteristics and the other is teachers of reading should familiarize themselves with each activity and try it several times so they can make it a part of their teaching repertoire.

9.8 STRATEGIES WHEN STUDENTS KNOW NOTHING OR LITTLE (NOVELTY OF INFORMATION)

One of the most widely used strategies for helping students activate their existing background or develop background that they are lacking is discussion. This strategy is used in the pre-reading, during reading and post reading stages and is usually combined with other activities. I would like to indicate that in this strategy as well as in others questions play an important role. The use of questions is of particular importance especially in the pre-reading stage when students know nothing or little about the text/selection they are expected to read.

9.8.1 QUESTIONS

The importance of questions in any reading class can not be denied. When used effectively in lessons that require reading, oral and written questions stimulate thinking and light the way to productive learning and retention of content material. Pearson and Johnson (1978) indicated that the issue “is not whether or not to use questions but how, when, and where they ought to be used” (p.154). Questions are tools in the hands of the teacher, but they are only as good as the context in which they are asked. They can become weapons which interfere with learning from content materials. For instance, when questions are used to foster a “right answer only” atmosphere in class they will not focus thinking about what has been read, nor will they prompt the processes by which students construct knowledge from text material. Instead they make the response - the correct answer - the all-important concern. Another issue to be considered when talking about the use of questions is that teachers often assume that students have the skills required to answer these questions in the first place. This, of course, may not be the case for some students. A question becomes a weapon when the student’s lack of maturity as a reader is not taken into consideration. Despite the negative effects and misuses of questions, they can become stimulants for thinking and can be incorporated functionally into reading in content areas.

9.8.1.1 PRE READING QUESTIONS

There is evidence in the body of literature that pre-reading questions as an activity is a popular approach among reading teachers. Traditionally, teachers pose questions to activate students’ background knowledge of the content of the text they will be reading which will automatically aid their comprehension.

Pre reading questions surely influence the comprehension process. In fact, pre reading questions provide much guidance for students lacking the ability to select important information from texts. Although the pre reading questions approach has been criticized for focusing students' attention on the questioned information and suppressing their overall comprehension of text concepts, they are still considered a useful activity to be used in reading classes. The pre reading questions could be very effective if they are combined with other strategies that encourage overall comprehension. So, teachers need to evaluate their purpose in asking pre-reading questions before they use them in their classes. There also should be a balance between text-based information and reader-based ideas. This is because when the reader, devoid of knowledge about the topic, is provided with factual pre questions (textually explicit), he/she is actually being asked to operate in an exclusively text -based mode. But when he/she is called upon to form a mental image of a text selection, there is greater integration of experiential and textual information. Therefore a balance between the two cases is required. The ReQuest activity serves this purpose. It is considered one of the most successful strategies for activating students' expectations about a topic. What the ReQuest does is that it creates this balance between textually explicit information and reader-based strategies for acquiring this information.

9.8.1.2 ReQuest

Any discussion of pre-reading strategies would be incomplete without inclusion of the ReQuest technique. ReQuest is a strategy devised by Manzo (1969) to help readers cope with text material by adopting an active, questioning approach to text reading. ReQuest is an acronym for reciprocal questioning, and its name comes from the questioning that the students and the teacher engage in together. The procedure simply calls for both teacher and students to take turns asking each other questions about common portions of a selection they have read. When students reach a point where they can predict a selection's outcome, they complete their reading and engage in extended discussion of the material. Students are guided in this process by the teacher who models the question asking procedures and attempts to elicit higher-level, textually implicit and experientially-based questions. In order to have a successful ReQuest session, the following steps should be adopted:

Preparatory steps

1. The teacher has to analyze the text or text selection for major concepts and sections portraying these concepts.
2. The teacher should determine prediction points in the text that allow the reader to form expectations about upcoming events. These predication points can be labeled in the teacher's copy of the material as P1, P2, P3, etc.
3. The teacher should explain the general ReQuest procedure to the students.

4. When the teacher reaches the final prediction point in the text selection, he/she asks students to generate all predictions they can think of for the final outcome of the selection. Then, the teacher lists the predictions verbatim on the board and asks students to vote on the ones they feel more plausible.

The ReQuest procedures

5. The teacher and students read the first sentence/segment/paragraph of a selection (this is based on students' age and level).
6. The teacher closes the book while the students keep their books open. The students may ask the teacher any question they wish relating to that first sentence/paragraph. The teacher must answer as accurately and completely as possible. Then, without threat or negativism, the teacher gives feedback to the students on the quality of the types of questions being asked.
7. It is the students' turn to close their books and the teacher's turn to ask any question that comes to mind. These questions purposefully include (a) any that will help the students realize what knowledge they have relative to the topic, and (b) the kinds of questions students might try to ask when their turn comes again.
8. The procedure is continued through a paragraph or two until students can be expected to project answers to the classic purpose question: "What do you think you will find out in the rest of the selection?"

Among the most helpful aspects of the ReQuest strategy is the motivation that can emerge from discussion and questioning during the initial stages of a reading assignment. Another advantage of ReQuest is that it has a built-in feedback and modeling feature that gives the reader needed information. In addition, it encourages students to base their purpose for reading on anticipatory questions. ReQuest is best used with small groups to encourage each student's participation, but it can also be effective with large groups when combined with interaction that involves dealing with different levels of sophistication of knowledge. As I have pointed out above, the teacher can assign a longer portion of the text to be read depending on students' age and language abilities. One sentence often isn't enough to engage all the learners in a meaningful question/discussion session. With older students similar to those who participated in the free recall and think aloud experiments, it is more valuable to extend the amount of text which is read between each questioning session. How much text to read at a time depends on its complexity, how much prior experiences with the topic students have had, and their sophistication with questioning techniques. Teachers have to remind themselves that their goal here is not to evaluate students' comprehension, rather they try to stimulate critical thinking and reasoning skills by modeling questioning techniques. At this stage when students know nothing or little, the teacher's role is to direct students to become engaged in the topic and to ask questions that will provide some introductory information about the topic. Moreover, the ReQuest strategy often generates interest and curiosity that might not otherwise emerge.

If the ReQuest technique was used with students who participated in this study prior to the recall task, their performance might have been much better. The discussion helps students to reflect on the reading material and justify their responses; a skill they need to understand the unfamiliar cultural concepts found in both texts. For example, this questioning method could have prepared students to comprehend the information about the ancient Egyptian Gods, the Pharaohs' medical beliefs, the spring menu and the Shammamah legend in the Shamm en-Neseem text and Easter smacks, use of shrovetide buns, the Sla Katten af Tonden game and the Fastelavn boat in the Fastelavn text.

9.8.2 LIST GROUP LABEL, WORD SORTS AND BRAINSTORMING

Although List Group Label and word sorts techniques are mainly used in vocabulary instruction, they share many characteristics with the brainstorming activity. In fact the procedures are identical except that in the brainstorming activities, students generate the words and phrases rather than have them selected by the teacher. The three techniques are background-building activities that can fit within any reading program and can be used at any age level. They are cooperative activities where students learn from and with each other. Such cooperation fosters successful, purposeful reading among all students, but may particularly be helpful for those who find reading difficult. In this case, the difficulty is controlled by the students since they themselves supply most of the material for the activities. Let's focus on the brainstorming activity since it is the most widely used technique in the pre reading stage to activate and develop students' background knowledge.

Brainstorming is one of the activities that are used to arouse curiosity before reading. It is an activity which draws upon students' own knowledge of a topic and then invites them to work to organize that information. Two basic steps are recognized when using the brainstorming technique, one is to identify a broad concept that reflects the main topic to be studied in the assigned reading and the other is to have students work in small groups to generate a list of words related to the broad concept in a fixed time. These steps help the teacher instantly discover what background knowledge students possess about the topic they are going to study. The technique starts when the teachers provides a word or phrase and then asks students for all the words that come to mind when they think about the key concept. When the brainstorming activity is over, the teacher can ask small groups to categorize the words and provide titles for the categories. Students must be prepared to identify the categories (and/or subcategories) and the logic behind each arrangement. In order to stimulate curiosity and arouse interest in the topic to be read, the teacher can ask students to make predictions about the content to be studied. One way of doing this is to ask, "Given the list of words and categories that you have developed, what do you think the reading assignment will be about?"

This activity will help teachers to have a quick and easy indicator of the knowledge and experience students bring to the lesson. After discussing the word categories and sharing the information,

students read. The usefulness of the brainstorming activity is clearly understood from Herber's words (1978):

“ the device of having students produce lists of related words is a useful way to guide review. It helps them become instantly aware of how much they know, individually and collectively, about the topic. They discover quickly that there are no right or wrong answers ---- Until the students reach the point in lesson where they must read the passage and judge whether their predictions are accurate, the entire lesson is based on their own knowledge, experience and opinion. This captivates their interest much more than the more traditional, perfunctory review” (p. 179).

To apply this to the current study, the brainstorming activity could be used in two situations, one is general and the other is specific. If the plan is to discuss the topic of festivals and introduce several different types of them (including the ones used in this study) in the next week(s), the reading teacher should then elicit general information about the celebrations of festivals in a brainstorming manner. This will serve as a preparatory stage before reading the target texts. But if the goal is to only focus on the Egyptian and Danish spring festivals, the brainstorming activity should be directed towards the activation of knowledge specific to Shamm en-Nessem and Fastelavn feasts.

9.8.3 SCAVENGER HUNT

This strategy is designed by Cunningham, Crawley, and Mountain (1983) to be used in reading classes where students have no or little background knowledge about the topic they are expected to read. It is best used when we teach longer texts or a text selection that focuses on a given topic. Again, this strategy will work better if the goal is to teach a selection on feasts and celebrations or if we want the students to expand their knowledge about the Danish and Egyptian spring festivals of Shamm en-Neseem and Fastelevn. Although the two texts used in the current study are relatively short, they include cultural concepts that need more clarification and this in itself may stimulate students to do much scavenging which will definitely improve their comprehension of such concepts. As I have indicated in my previous discussion, these cultural concepts caused some difficulties during the recalling task and the use of the Scavenger Hunt technique will indeed minimize these difficulties.

The strategy exposes students to vocabulary related to the subject and helps them build appropriate experiences with unfamiliar concepts before the study of the selection begins. It is a way to develop an initial awareness about a new topic in an exciting and motivational manner. The procedure starts when the teacher announces the topic to the class and introduce some of the key vocabulary and concepts which the students will encounter. The class is then divided into teams each of which is assigned a leader. The teacher provides each team with identical lists of terms for the scavenger hunt and allows the teams a limited time to gather all the information they can about each of the terms. The students are encouraged to use varied

sources to produce all kinds of information about the words. These sources may include written descriptions, pictures, real objects, photographs, etc. The team leader will assign a certain number of words or terms to each member to concentrate on while gathering information. This information should be kept secret from other teams who are searching for the same things. Once the students finish their search for information and on the assigned day for discussion, each team presents what they found in their hunting and shares the information with other groups. It is an opportunity for students to be exposed to varied informational sources as its unlikely any two teams will have identical data about the respective words and concepts. When the presentation of the data is over, students should be awarded points and credit for their participation and successful completion of the hunting tasks. Each teacher has the freedom to develop his/her own rewarding system.

Although the Scavenger Hunt activity is recommended in situations where prior knowledge is minimal, it can be used with learners who already know a lot about the new topic but with a measure of discretion because in this case students won't need to do much scavenging. The real advantage here is the competitive spirit with a twist of novelty and physical activity as well as students' motivation which new and unfamiliar topics rarely stimulate.

9.8.4 ANTICIPATION GUIDES

Anticipation guides are believed to activate prior knowledge and promote purposeful reading (Vacca & Vacca, 1993). One of the major features of an anticipation guide is that it brings misconceptions about a topic to the surface. Then one can begin to modify these conceptions through a well-formulated instructional sequence. Anticipation guides operate at the experientially-based level of understanding and therefore they elicit a response based on one's current belief system. Students at the pre-reading stage may strongly defend a response to a guide statement with little fear of failure. Later, as the learning sequence progresses into the reading and post-reading stages, a mismatch between the students' preconceptions about a topic and the information being introduced should result in a subsequent modification of their initial knowledge base.

In an anticipation guide, the teacher presents students with sheets that contain written statements for students to think about and discuss before (and often after) they read. Clear directions are provided for each anticipation guide to ensure that students understand and carry out the task at hand. The statements which are included in these guides are intended to activate prior knowledge and arouse curiosity about issues addressed in the text. Students are encouraged to reflect on the notions addressed in these statements, express their opinions, and justify their choices. Obviously, this process of explaining their thinking allows students to sharpen and organize what they know about a topic and become aware of what they don't know. Anticipation guides have other advantages one of which is their function as informal and diagnostic tools. It is a useful method for teachers to appraise prior knowledge at the pre-reading stage and evaluate the acquisition of content based on post-reading responses to the guide statements.

Below is an anticipation guide demonstration on the Fastelavn festival in Denmark. I believe that this guide will establish a purpose for reading and help students realize what they know about the cultural customs and traditions associated with the spring festival in Denmark. Prior to reading, students have the opportunity to express their opinions and justify their choices which will be modified, changed or corrected in the post reading stage. A guide such as this one prepares students to focus on the unfamiliar cultural notions and accordingly avoid the difficulties such as the ones encountered during the recall task in the first phase of this study.

Figure 9. 2

Anticipation guide demonstration: Fastelavn

Directions: Read each statements about Fastelavn. In the “Before” column, check the ones you agree with. Be ready to explain your thinking.

Before		After	Line/paragraph
-----	1. Fastelavn is a religious festival in Denmark equally important to Christmas and Easter.	-----	-----
-----	2. Only elderly people celebrate it by attending the services in churches.	-----	-----
-----	3. Shrovetide buns are important in the celebration of the feast.	-----	-----
-----	4. Easter and Fastelavn don't share any customs.	-----	-----
-----	5. Celebrations differ from place to place within Denmark.	-----	-----
-----	6. Coloring and exchanging eggs is an important tradition in the Fastelavn festival.	-----	-----
-----	7. Danes put a live cat in a wooden barrel when playing “Knocking the cat out of the barrel” game.	-----	-----
-----	8. Children collect money for poor people during the feast.	-----	-----
-----	9. Fastelavn is not a public holiday but Easter is	-----	-----
-----	10. Fastelavn is a modern Danish feast for spring purification.	-----	-----
-----	11. Parades and processions go around Denmark in the early morning announcing the beginning of the spring season	-----	-----
-----	12. Danes don't fast during the Fastelavn feast.	-----	-----

Directions: Now that you've read about Fastelavn, read the statements again. This time check the statements you agree with in the “After” column. Then in the “Line/Paragraph” column, write down the line or paragraph in the text that helped you decide. Again, be ready to explain your thinking.

9.9 STRATEGIES WHEN STUDENTS KNOW SOME OR A LOT (FAMILIARITY WITH INFORMATION)

Some of the strategies discussed above can also be effective in teaching reading comprehension to students who have some or a lot of prior knowledge about the reading materials but necessary changes should be made to fit into the new learning situation. The following strategies are believed to be more appropriate in such situations when students are familiar with some or many ideas and concepts presented in the content of the text or selection. Similar to the anticipation guides, these activities can be used in the pre reading and/or the post reading stages.

9.9.1 K-W-L (KNOW-WANT-LEARN)

The K-W-L activity (Ogle, 1986), as its name suggests, consists of a chart that has three columns labeled: what we know about the topic, what we want to know from reading about the topic, and what we learned from reading. Students are asked to complete two portions of the K-W-L chart before reading the text. The activity may be done in pairs or small groups. All students can also work as one group to complete the chart. In the K-W-L technique, the teacher starts the discussion by providing a topic, phrase or a key word related to the text that students are expected to read. The teacher serves as a recorder and writes students notes in the K and W columns. Students talk and share information with each other about the topic and pose questions that they want to have answered or issues they hope to learn more about. Then students start their reading. When they have read the text, they complete the third column by writing what they have learnt. In this stage, students may report information related to concepts and issues, answers to questions, important information found in the text but not discussed earlier, and issues that students find interesting. The next step is to sort ideas out and decide on which ones they want to record as students sometimes come up with so many of them. So, students have to think back through the discussion and summarize and synthesize them so as to decide what ideas should be recorded. Also, students may not find the answers to their questions listed in the W column. This is a great opportunity for students to expand their knowledge about the topic and teachers should encourage them to do further readings, interviews, or individual projects. The information from the K-W-L chart could also be useful in follow up activities such as writing summaries.

9.9.2 CLUSTERING

Clustering is designed as a writing activity. Since the teaching of reading is closely associated with other language skills particularly writing, it is useful to use clustering as a technique in reading classes where students know a lot of information about the topic to be discussed. This activity offers a way to evoke a global perspective on a topic in a manner that encourages students to categorize the important

concepts prior to reading. It is looked at as a nonlinear brainstorming process akin to free association. First, the teacher identifies a key nucleus word and allows time for brainstorming and clustering of the ideas associated to this word on a paper. Second, students discuss and share these ideas in small groups or pairs. Finally, the teacher constructs a group cluster on the board if he/she feels this is appropriate. The teacher's goal should be one that allows students to structure a lot of information so they can use it as a foundation for new learning. Of course, the organization of prior understanding provides a framework for new learning. Teachers have to remember that there is no correct way to create any cluster as each one will be unique to its creator. In other words, teachers should follow their best instincts with clustering and try to think of clusters that can be as stimulating for students as possible.

The following are the directions of a clustering activity on the topic of festivals which can be used as a foundation for new learning. The researcher chose this topic to relate the use of the strategy to the current study but of course the clustering technique can be used with other sophisticated topics which students hold schemata for. In this case, students can make higher level associations which they eventually share and compare to other clusters their classmates make. Anyway, this step will prepare students for deeper understanding of the reading material.

Directions: Free associate with the word FESTIVALS. As a word comes to mind, write it near the nucleus word. Circle it and draw a line to the nucleus word to indicate the association. Now, think of associations with the second word you have circled. Then think of new words and follow the same steps. When you are finished, discuss with others what you included and why.

9.9.3 CUBING

Cubing is another activity which involves writing and can be used with students who the teacher suspects have some prior knowledge about the topic to be read. It seems that most anticipation activities are enhanced when they begin with a writing component. In this activity, writing will help students to reflect and gather their thoughts about the reading material. It is an opportunity for the students to record their ideas which they can refer to during the discussion session. As its name suggests, the teachers uses a cubical box of almost any size and covers it with paper which he/she can write on. The teacher writes a direction on each side of the cube to stimulate students to write briefly on certain aspects of the assigned topic. Cowan and Cowan (1980) suggest the following six directions to be written on the cube:

1. **Describe it:** Look at the subject closely (perhaps with your mind) and describe what you see. Colors, shapes, sizes and so forth.
2. **Compare it:** What is it similar to? What is it different from?
3. **Associate it:** What does it make you think of? What comes into your mind? It can be similar things or different things, places, people. Just let your mind go and see associations you have for this subjects.
4. **Analyze it:** Tell how it is made. (You don't have to know; make it up.)
5. **Apply it:** Tell what can you do with it. How can it be used?
6. **Argue for or against it:**
Go ahead and take a stand. Use any kind of reasons you want-- logical, silly, or anywhere in between.

Suppose that the teacher chooses the topic of the Egyptian spring festival of Shamm en-Neseem, students could be directed to the side of the cube that says, "describe it." The teacher should then allow students a set amount of time to write all they can describing the spring festival in Egypt. They should also be allowed to make rough notes of the associations without being worried about complete sentences or spelling. After they have completed the description, students will be asked to turn the cube to the side asking them to "Associate it" or "Compare it" and students will associate it with or compare it to similar festivals in their countries, i.e. Easter. The teacher can choose to use all the six sides of the cube in one session or limit the usage to two or three sides only. This will depend mainly on the nature of the topic to be discussed. When the writing task is finished, students must share their responses to each direction on the cube. This is a vital stage because students with limited background learn from those with a richer base of information on the topic. Clearly, the discussion is an important feature of any cubing activity. Sharing the information with others helps students make associations between new learning and prior experiences and creates an awareness of essential concepts and their links to one another. During the cubing activity, students become very enthusiastic and active participants; it is an opportunity for them to call for their prior knowledge and foster creative imaginings.

Teachers should feel free to make extensions of the cubing activity and find different ways to adapt its basic format. This will depend mainly on the nature of the reading material to be discussed and the level of stimulation the direction written on cube sides will provide. There are several alternative labels for the various sides of the cube to be considered by the reading teacher when dealing with more sophisticated students. These may include argument, factual description, comparison, contrast, persuasion, analytical reasoning, point of view, and logical deductions.

9.10 STRATEGIES FOR MAIN IDEA DEVELOPMENT

One of the questions the current study addresses is how ESL/EFL readers construct main ideas. Some researchers (Van Dijk and Kintsch, 1983)) believe that the main idea is constructed automatically

while others (Bernhardt, 1990) suggest that students sometimes use certain strategies to construct main ideas. The results obtained from the think aloud experiment supported the latter hypothesis. So, as teachers of reading we should be aware that training our students in main idea construction is crucial to reading and comprehending expository texts. Expository passage organizers, concept guides and summaries are among the strategies that improve L2 learners' skill to develop and construct main ideas from a text.

9.10.1 EXPOSITORY PASSAGE ORGANIZER (EPO)

EPO study guides (Miller and George, 1992) are process models which teachers use to improve students' reading and writing of expository text. One of the advantages of the EPOs is that they help students see the structure of expository text and how the structure and organization of ideas in the text affect their comprehension and recall. In addition, they help students use reading as a model for their writing by focusing their attention on overall text structure and organization of main ideas and details. Students in this case are able to develop their text schemata or cognitive text templates which are so essential for producing good reading comprehension and writing. The ability of developing text schemata is gained through the students' experience in completing ESO study guides for various types of text structures in well-written prose.

Since comprehending the overall structure of text is critical to good reading comprehension, it is beneficial to use the EPOs as a model of the reading process which focuses on this aspect. The classic five-paragraph essay typically contains an introduction, body, and conclusion. The first paragraph introduces the topic; the second, third and fourth paragraphs usually compose the body of the essay, elaborating on the topic; and the fifth paragraph concludes the essay. The EPOs reading process study guides demonstrate the importance of comprehending the overall structure of text by getting students to interact with such structural parts and focus their attention on them. In a reading session in which EPOs are used, students are also able to recognize what Meyer (1977) refers to as the top-level or superordinate structures of text. Expository passage organizers focus attention on the critical components of the various top-level structures suggested by Meyer. For example, when students encounter a problem-solution text, EPOs label the problem, the solutions, and the results of the solutions. When students read a cause-effect text, these guides identify the cause and its effects. In the case of compare/contrast text, EPOs show what is being compared and how the items are alike or different. For a descriptive text-the simplest structure, though not always the easiest to comprehend - EPOs help students focus on the attributes of a topic or on the functions of a process. In all these cases, EPOs help students focus on and interact with the various types of superordinate structures, particularly the frames that define the structures.

Another important feature of the expository passage organizers is the way they identify and focus attention on main ideas and supporting details. They are useful patterns that show students the hierarchical organization of ideas in a text. When using the EPOs, students can see how the parts relate to the whole, and how the whole relates to the parts. As I mentioned above, EPOs facilitate reasoning about how to

comprehend paragraphs and overall text content. There is not doubt that this kind of reasoning and understanding is a critical component of the reading comprehension process.

EPOs are an instructional aid that teachers can use to help improve the way their students think about the organization of ideas in expository text. It is an opportunity for students to see how readers and writers organize their thoughts when constructing or composing meaning during the reading and writing process. Students always need models to help them read and write expository text and EPOs provide such training for them. The effectiveness of the EPOs lies in the way they present the identification of the structure of expository text and the students' understanding of the interrelationship of the ideas within the text structure.

The EPO guide below is designed to teach the two texts used in this study and other texts similar to them. Although the texts follow the descriptive pattern, the EPO guides can be used in teaching other expository patterns such as cause-effect and comparison-contrast. In fact, the EPO is a very useful strategy in teaching text structure . The reason I chose to include this strategy here is that its format directly focuses students' attention on main ideas and their supporting details. As I said, the following EPO guide can be used to teach both Shamm en-Nessem and Fastelavn texts. As a follow up, the teacher can ask students to write an essay describing a similar celebration using this model.

Figure 9. 3

Sample Expository Passage Organizer (EPO) for a descriptive text

Instructions: A. Complete the following EPO by looking back at the passage.
B. Correct your EPO by using the completed EPO on the last page of this study guide.

Passage pattern: Collection of descriptions

Title _____

I N T R O D U C T I O N	D E S C R I P T I O N 1	<p style="text-align: center;">Introduction-Description-Paragraph 1</p> <p>Main Idea _____</p> <p>Detail _____</p> <p>Detail _____</p> <p>Detail _____</p>
B O D Y	D E S C R I P T I O N 2	<p style="text-align: center;">Body-Description-Paragraph 2</p> <p>Detail _____</p> <p>Detail _____</p> <p>Main Idea _____</p>
B O D Y	D E S C R I P T I O N 3	<p style="text-align: center;">Body-Description-Paragraph 3</p> <p>Main Idea _____</p> <p>Detail _____</p> <p>Detail _____</p> <p>Detail _____</p>
C O N C L U S I O N		<p style="text-align: center;">Conclusion-Summary-Paragraph 4</p> <p>Main Idea _____</p> <p>Detail _____</p>

Use your descriptive EPO as a model for writing your essay

9.10.2 CONCEPT GUIDES (CONCEPT DEVELOPMENT)

The basic principle of using concept guides in teaching and learning from expository texts is based on research on discourse analysis and particularly the study of text organization in written material (Frederiksen, 1975; Meyer, 1975, 1980). This research describes the content structure of a passage as specifying relationships and showing how some ideas are located subordinate to other ideas. Meyer (1984) states that "Not all of the information in the hierarchically organized schema is equally important to or accessible in encoding, storing, or retrieving. The superordinate, or top-level, structure, which corresponds to the main ideas of a passage and interrelationships among these main ideas, is cognitively more salient than the lower levels, which correspond to supporting ideas, detailed subordinate information" (p.447). So, main ideas are located in the top-level content structure while details are located at the low-level. The relationship between main ideas and details was explained by Herber (1978) in the following way : " 'Main idea' is sometimes identified as an additional organizational pattern. True, it is a pattern, but --- Its construct is so broad that it subsumes each of the other patterns. For example, a cause might be the 'main idea' of a paragraph and the effects, the 'details'; or a comparison might be the 'main idea' and the contrasts, the 'details'; or a stated objective might be the 'main idea' and the enumeration of steps leading to that objective, the 'details' " (p.78). This suggests that within any pattern of organization there are likely to be certain concepts that are more important than others. So, it is our duty as reading teachers to train our students to distinguish important information (the main ideas of a passage) from the less important information (the details). One of the most effective strategies to serve this purpose is the use of concept guides in reading expository texts. Concept guides are designed to help students associate and categorize subordinate information under major concepts (Baker 1977). To construct a concept guide, the teacher has to follow two steps: (1) analyze the text material for the main ideas, and (2) identify less inclusive concepts and relevant propositions which support each main idea in the text. This activity proved to be effective in the post-reading stage. There are many ways of developing concept guides one of which is to provide students with a chart that has two columns; one for major concepts and the other for supporting details. The teacher provides the main concept(s) before reading and asks students to write the supporting ideas for each concept after they have read the text. Students can also provide a main concept for a group of subordinate ideas and/or specific details that are attached to it. Concept guides can be modified to serve the purpose and objectives of each reading lesson.

Similar to the Expository Passage Organizers, concept guides have the advantage of helping L2 readers to concentrate solely on the main concepts of a passage and the details related to each concept. A model concept guide for the Shamm en-Nessem text is presented below. In this guide, students can either be asked to place the number of each statement next to the concept it supports or provide the details for each main idea statement.

Figure 9. 4

Sample of Concept Guide: recognizing main ideas of Shamm en-Neseem text

- I. **Directions:** Read the following text. As you read, check the statements below which say what the author said.
- A. Modern Egyptians still celebrate the coming of spring.
 - B. The pharaohs used to pay tribute to their Gods.
 - C. Lettuce, onion, eggs, and fish play an important role in the celebration.
 - D. Ancient Egyptian beliefs and legends still exist in modern Egypt.
- II. **Directions:** Place the number of each statement you checked in the box next to the concept that it supports. A statement may be used more than once.

Concepts	Supporting details
-----	<ul style="list-style-type: none">- The spring festival's name changed from Shemou to Shamm en-Nessem- The celebration remained unchanged for more than 5000 years.- The festival brings joy and rejoicing to the minds and hearts of all people.
-----	<ul style="list-style-type: none">- The harvest month of Shemou was welcomed by paying tribute to Min, the God of fertility.- Lettuce, the plant of Min, was carried in ceremonial procession.- Ancient Egyptians used to sacrifice fish to the Gods. They salted the fish to eat it after the fast was finished.
-----	<ul style="list-style-type: none">- Lettuce, onion, eggs and fish are important items in Shamm en-Neseem menu.- Ancient Egyptian believed that lettuce contains an oil beneficial for fertility.- Onion has a healing power.- The egg has always been symbolic of God's creative power, a symbol of the beginning of life.
-----	<ul style="list-style-type: none">- Children are bathed on the eve for fear that the "Shammamah" sniffing around when all are asleep, discovers a foul smell.- In ancient Egypt, a sick child was cured by only smelling onions.

9.10.3 SUMMARIES AND CLOZE EXERCISES

One of the goals of using summaries and cloze exercises in reading and writing tasks is to focus on important information and the pattern being used. When preparing summaries for our students to read or asking students to write a summary of a passage they have already read, we tend to concentrate on main concepts leaving the peripheral details out. The resulting summary also reflects the text structure of the original passage which the teacher wants his/her students to recognize and later apply in future reading assignments. Cloze exercises are mainly designed to cue readers to an author's pattern of organization or to review key concepts. A cloze concept guide for review is developed by selectively deleting technical vocabulary terms that portray key concepts. In this case, students are required to provide the missing words through the activation of their background knowledge. The teacher can include the missing items at the bottom of the page in random order if he/she feels these clues are helpful or necessary. If the teacher prepares a comprehensive summary, he/she can simply delete key words to form a cloze exercise. The missing items can be content words that are culturally based. The cloze technique is used in the current study and proved to affect students' recall of key concepts in the Fastelavn and Shamm en-Neseem texts. The researcher recommends this technique as an effective device in developing students' awareness of main ideas and text structure.

9.11 STRATEGIES TO DEVELOP AWARENESS OF TEXT STRUCTURE

There are several strategies that help students familiarize themselves with different text types some of which were already introduced in the above section. One way to do so is to train students to use pattern guides of different formats such as cause-effect, comparison-contrast, time-order and simple listing. Graphic organizers and semantic maps are among these patterns which show the author's organization of a text and the relationships between key concepts and vocabulary. If the text is not well organized, it is sometimes advisable to reconstruct it in order to facilitate comprehension and recall. Certain text types are loose and therefore cause comprehension difficulties. In this case, reconstructing texts may be a useful solution.

9.11.1 PATTERN GUIDES

Pattern guides are useful devices to help readers recognize the relationships among ideas in a text. In order to prepare pattern guides, teachers must do the following:

1. Decide on the key ideas to be gained from reading the text.
2. Recognize the organizational structure of the text, i.e. cause –effect, simple listing.
3. Give clear instruction to students and make sure their task is to place the relevant information in the pattern.

4. Model the organizational pattern before you introduce it to the students.
5. Give the students the opportunity to discuss different text patterns and identify main concepts.
6. Allow students to suggest other patterns themselves.

9.11.2 THE GRAPHIC ORGANIZER

The graphic organizer (Barron & Earle, 1973) is a visual aid which organizes key vocabulary into schematic diagrams that represent the semantic relationships among concepts. It is considered an excellent mechanism for defining related concepts. In a reading lesson, graphic organizers are usually introduced or developed during the pre-reading stage. Their primary role is to activate and organize information and how it relates to other information. They may also be used as post-reading techniques to reinforce and summarize. In post-reading, students return to the original graphic organizer and discuss how the reading changes in their visual display. In addition, Readence and Moore (1979b) indicate that graphic organizers can be used in the same lesson to enhance both readiness and recall of material. Meyer and her associates (1980) and Barlett (1978) reported that readers tend to remember information from texts in a hierarchical fashion. Their studies suggest that teaching students to identify organizational patterns improved the quality and structure of their memory for information presented to them. Based on these findings, we can conclude that a graphic organizer which reflects the organizational pattern of the text and is presented to students before they read will function as a road map of important concepts.

9.11.3 SEMANTIC MAPS

As mentioned in chapters three and four, in order for any reader to comprehend written material, he/she must have the schemata for defining the purpose of reading, identifying the organizational patterns of the material, and interpreting the key concepts. The semantic map is one of the most effective devices which helps students build background and see relationships between ideas and concepts in a given topic (Pearson and Johnson, 1978). It is a visual display for establishing the prerequisites for comprehending written material and for activating appropriate background. Semantic maps have different forms and teachers should remember that there is no one right way to develop a semantic map. For example, a teacher can use an oval shape to represent the concept he/she wants students to focus on and lines with arrows and words written above them to represent the relationships. The words written on the arrows to show relationships will vary according to the topic being discussed. These relationships depicted on the map can be class, example, or property. Another teacher may provide students with a key word and ask them what they think of when they hear it. The teacher lists the students' responses on the chalkboard and asks them to put their associations into categories. The more abstract superordinate concepts of matter to which the major concept is related are placed at the top of the map while the schemata of more concrete or subordinate levels are placed in the lower columns. After helping students label the categories, the teacher

asks students to read the selection to learn more about the key concept. It is advisable to encourage students to pose their own questions about what they want to learn about the topic. When students have finished reading, they start revising the original map. This means that they will pay more attention to the set of categories and pre-reading questions related to the major concept. Based on the information acquired from their reading, they may add new ideas, change or correct others, and confirm their original arguments.

The teacher's guidance, good discussions, posing of questions and the relating of students' responses contribute to the success of semantic mapping. As we can see, the discussion in a semantic mapping activity plays a vital role. During the semantic mapping activity, students talk about the meanings and uses of new words, new meanings for old words, additional meanings for known words, and of course, the relationships among words. Clearly, when teachers use semantic mapping they are actually conducting a discussion that is visually represented for the students. Therefore, they should apply the guidelines for good discussion to their lessons on semantic mapping.

Since this study is concerned with the influence of text structure, the use of semantic maps will be beneficial to EFL/ESL students in their reading classes. The teacher can use a semantic map to link students' basic concepts of the topic to both abstract schema and concrete examples. Since most students are usually familiar with the term that represents a basic schema, teachers should start with topics at this level and then consider specific examples and finally relate the term to the superordinate schema. By doing so, the teacher is building bridges between the known and the new. What happens here is that mapping is used to connect the conceptual meanings of new words to a hierarchical organization of concepts of schemata. As has been discussed earlier, one of the advantages of teaching words for their associative and categorical meanings is that it enhances recall. Whenever a particular concept in memory is activated, the whole structure of concepts with which it is associated is activated and becomes available for use in remembering and comprehending.

9.11.4 RECONSTRUCTING TEXT

Texts which are written in a listing format are considered poorly structured and believed to cause problems to students particularly if recall is a major objective of the reading lesson. It is also true that most textbook organization is of this sort (simple listing). Customarily, the author makes a general statement and then supports it with a number of statements listed in no particular order. As I have pointed out in the above section in this chapter (see also chapter 3), this pattern does not help the reader discern the more significant from the less significant ideas. In addition, it does not stress the relationships among key ideas.

The problems encountered by using the simple listing pattern in reading, can be solved if the teacher restructures the text in order to become more organized and hence, better recalled (i.e. cause-effect, comparison-contrast). Alvermann (1982) reported that using the restructuring strategy results in better comprehension of major points than merely following the author's listing. In this activity, the teacher identifies a key term for the material to be read and then draws a form that corresponds to the pattern selected. This form has empty boxes arranged to represent the slots into which information can be mentally

inserted by readers as they process the material in their search for missing information. It is important though that the students should be trained to use the reconstructing technique and should be given the opportunity to construct their own forms and organizers. At this stage, modeling plays an important role. Students need to be shown several examples before they can actually start using the technique on their own.

9.12 LIMITATIONS OF THE STUDY AND SEGGESTIONS FOR FURTHER RESEARCH

The investigator acknowledges limitations of the study, or areas of concern. Three limitations of the study are: the character of the tasks required in the study, the role of individual difference factors and the study's inability, for practical reasons, to directly measure the simultaneous effect of both content and form on EFL readers.

The tasks required in the study lack rigid controls. For instance, the researcher did not design the questionnaire in a way that makes the information obtained subject to statistical analysis which may have helped in obtaining effective results. The researcher's initial thought was to obtain more information about the subjects' background through a simple form that includes straightforward questions. Although the questionnaire achieved the goals for which it was designed, the information gathered was stimulating enough to form a solid foundation for deeper analysis of students' performance in the recall task and the think aloud experiment.

In the think-aloud experiment, although the interviewers and students were given clear instructions on how the task should be conducted, the Danish interviewer provided more cues that might have given the Danish subjects an advantage over the Egyptian students. Also, the Danish subjects' verbal talk was badly taped and thus included several empty slots which were marked inaudible. Possibly, this affects the quantity and quality of the Danish subjects' recall.

Individual differences and the subjects reading skills might have affected their performance on the recall task. Although the subjects who participated in this study are in the same grades and nearly of the same age, Danish students' proficiency level is believed to be higher than the Egyptian subjects. Theoretically, their vocabulary range is higher than that of the Egyptian students and their ability to use context to guess the upcoming words in a text is expected to be better. This should be taken into consideration because vocabulary knowledge is one of the best single predictors of reading comprehension performance.(Thorndike, 1973). Vocabulary and comprehension are correlated because both reflect the individual's ability to learn or acquire new information from context. While some word meanings may be acquired through explicit reference, many word meanings are learned through implicit or contextual reference. Again, these skills may put Danish students in a comfortable learning situation compared to their Egyptian counterparts. On the other hand, Egyptian subjects' memorization skill may be another factor that influences their performance in the recall task since the Egyptian educational system encourages rote leaning. In Egypt, in many of the foreign language classrooms as well as content area courses, students are

trained to memorize sentences, examples, patterns and even chunks to be reproduced in examinations. In this case, Egyptian subjects' success in recalling some of T units could be attributed to this kind of training.

As is the case in many schools, students are placed in classes on the basis of their overall performance in English during the academic year. This includes their performance on regular quizzes, midterm and final examinations and oral participation in classroom activities. Students automatically go to the next grade when they obtain the passing grade. In order for research similar to this one to be conducted and gain more accurate and reliable results, a standard proficiency examination should be used to determine the subjects' reading level prior to the research application. In determining the students' level, the current study relied mainly on the regular placement procedures in both schools as well as the assessment of the students' reading skills provided by the English language teachers. No other tests were used because: (1) teachers were worried that the research would take much of the class time and accordingly they won't be able to finish the syllabus on time, (2) students were reluctant to take any tests because they thought the two experiments already include too many of them. Added to that, the daily/weekly quizzes they take, (3) some teachers were confident of their reading evaluation methods claiming that they truly diagnose the problems and determine the exact level, and (4) teachers were not familiar with the procedures of conducting standard proficiency examinations such as the TOEFL and IELTS.

Although this did not hinder the current study from achieving its ultimate goals, the researcher recommends that factors other than the one to be examined or evaluated should be strongly controlled in order to obtain thorough outcomes. In addition, students in both groups should have received enough training in recalling texts before participating in the actual experiment. By doing so, we avoid having differences that result from familiarity with the technique being used.

One of the goals of the current study was to examine the effect of text structure on the reading comprehension of high school students, namely the collection of descriptions text type. The reason to do so was due to the fact that most of the research done in this area focuses on well organized text forms leaving out the simple patterns simply because they are loose. To study the simultaneous effect of both content and formal schemata on comprehension and recall, one has to alter the format of the text to compare the readers' performance on the original text to their performance on the new pattern. Since this was not the aim of the current study because the major interest was to focus on one text type, the researcher succeeded in touching on this issue when conducting the recall task and think aloud experiment.

The study of the simultaneous effect of content and form needs further research. The researcher did not carry out this kind of research because of his interest in the study of loose texts in the first place and also such research requires other research procedures. For example, different text types should be included and other text analysis and research designs should be adopted. As suggested by Carrell (1984), further research on the combined effects of content and form in ESL reading comprehension is needed. I find myself compelled to repeat Roller's (1990) words: "combining these two perspectives by focusing on the interaction between knowledge and structure variable might bring some order to the massive body of conflicting research" (p. 81).

Another point of interest for further research could be the examination of L2 reading comprehension of longer texts. Many research studies have used short, well prepared and sometimes edited versions to ensure the attainment of reliable results. Research has ignored to some extent naturally occurring texts and authentic reading materials. Naturally occurring texts present more difficulty to ESL/EFL readers particularly when they are asked to identify the main ideas in them. This is due to the complex structure and novel content of these texts. Naturally occurring texts are structurally more complex and are likely to utilize a greater variety of text structures, thereby increasing the processing demands.

Further research may also attempt to examine other types of proficiency levels, other cultural groups and other types of manipulation of the content and form. In this study, the researcher examined the performance of two groups of high school students from far distant cultures. It seems practical to suggest that further research studies should include other groups from ethnic, geographical, professional and cultural backgrounds. The study of the influence of prior knowledge on reading comprehension should also deal with other aspects of background knowledge. As has been explained in chapter one, background knowledge has been operationalized in a variety of ways: cultural knowledge; religious knowledge; vocabulary knowledge; technical knowledge; topic familiarity and contextual visuals. Researchers should extend their work to include these elements.

It will also be interesting to study the strategies which second language readers adopt to make sense of what they read. Research on strategy instruction could examine the way some ESL/EFL readers from specific cultural backgrounds comprehend certain texts better than others. The notion of whether or not first language reading skills are transferable is of special interest here. Students may use their experience in reading texts in the first language and possibly apply the same strategies in reading texts in the target language. Although text structure varies from culture to culture, second language readers may succeed in comprehending a particular text type which is considered a preferred type in their own culture. As a result, they adopt the same strategy when reading texts of similar types in the foreign language. For example, Arab students may find it easier to comprehend and recall descriptive texts since parallelism and repetition (and sometimes much redundancy) are features of Arabic rhetoric. This kind of research would contribute to the study of rhetoric and the teaching of reading strategies.

Future studies may also consider other approaches that deal with the rich verbal data obtained from using think alouds. The data collected in this study needs further analysis which could shed some light on other aspects of the reading of specific second language learners. Moreover, reading instruction should benefit from the useful information which reflects the students' immediate thinking. This means the analysis of verbal report data should contribute to the development of effective reading strategies.

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